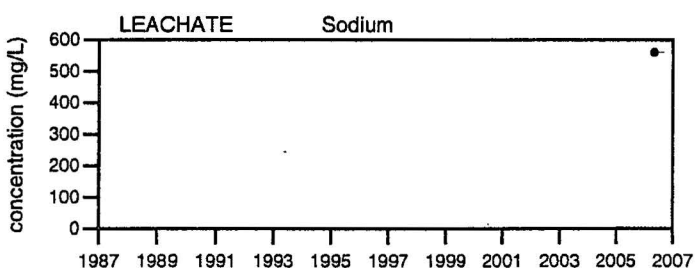
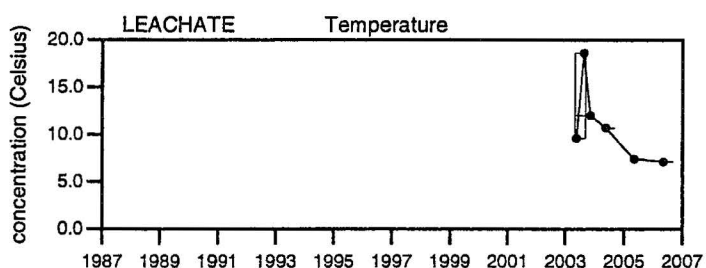
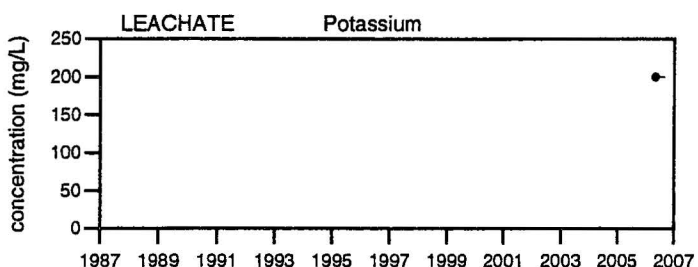
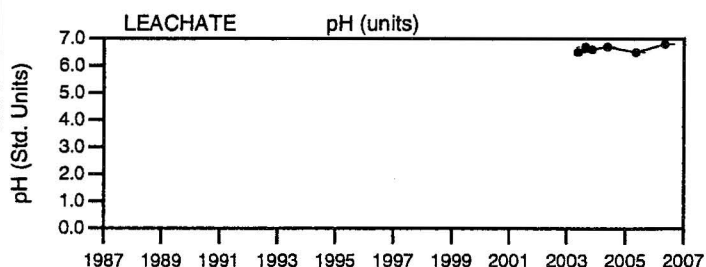
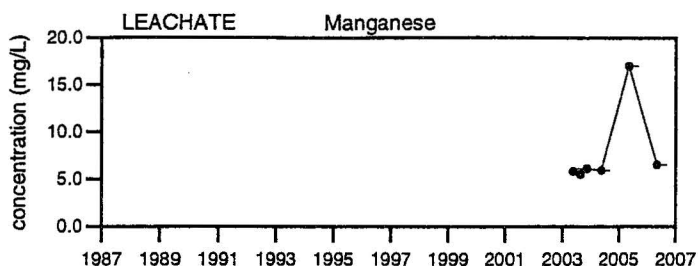
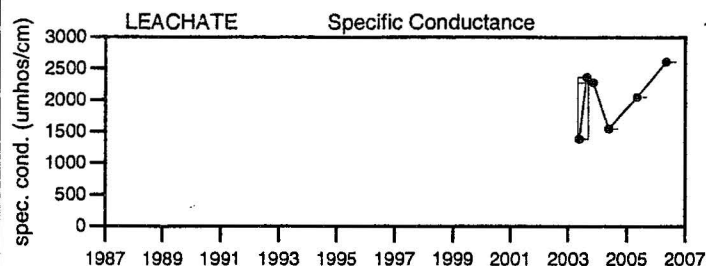
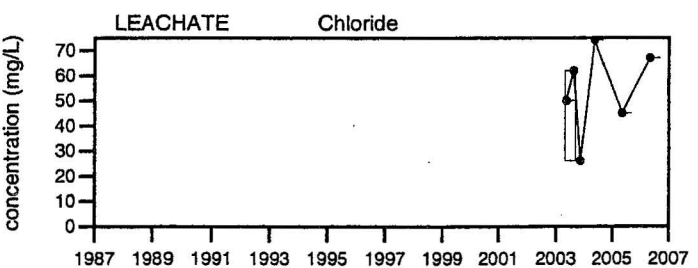
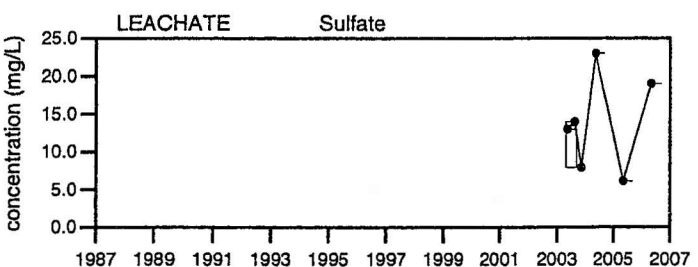
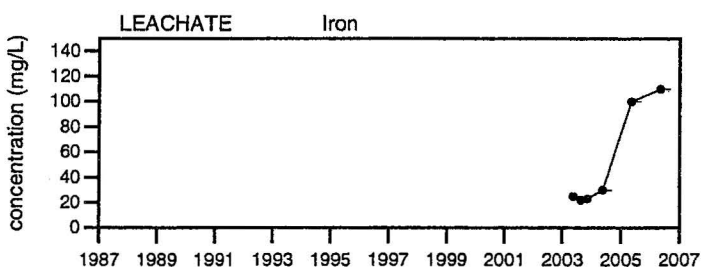


APPENDIX E
TREND ANALYSIS PLOTS

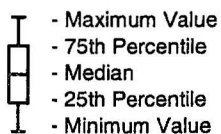


No data for Water Level at LEACHATE

No data for Total Kjeldahl Nitrogen at LEACHATE



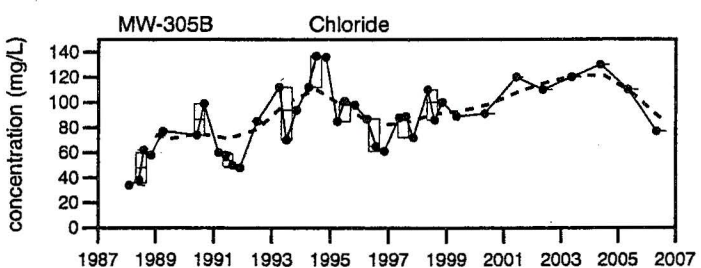
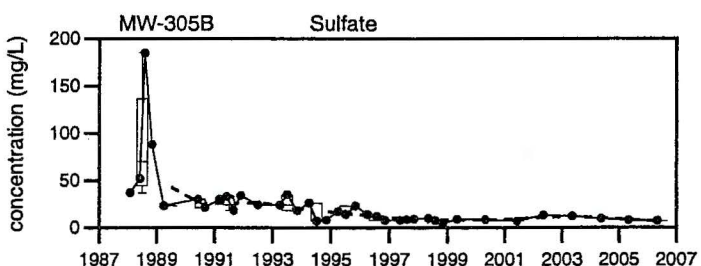
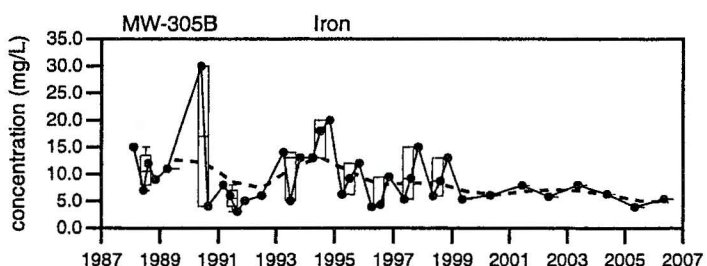
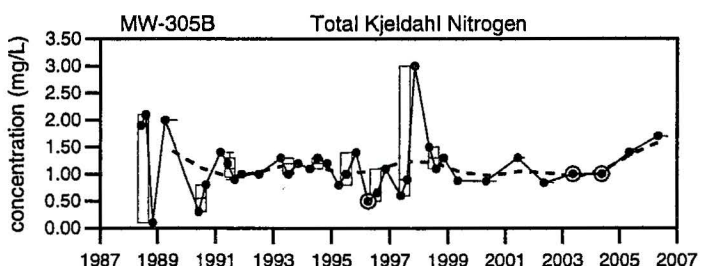
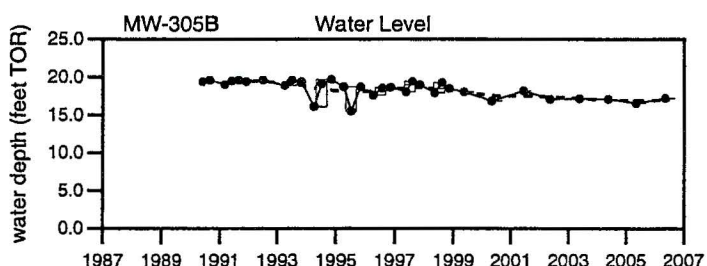
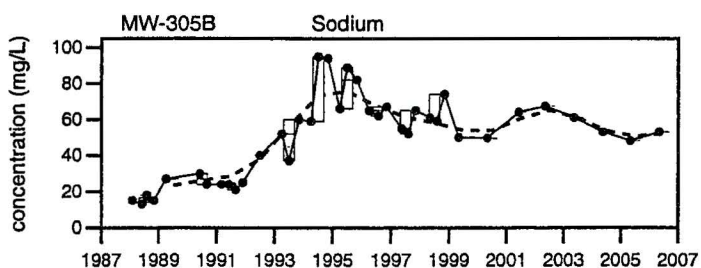
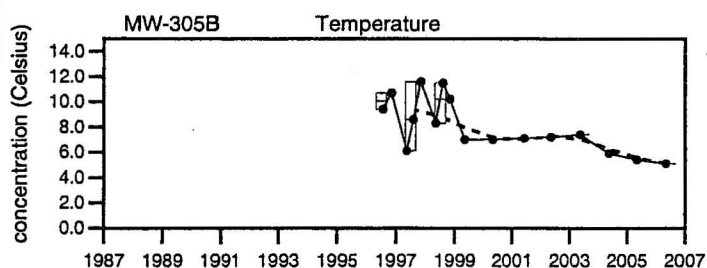
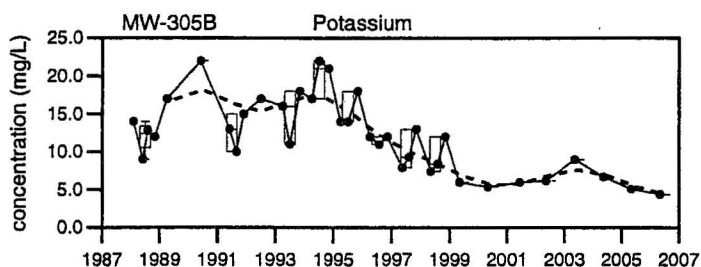
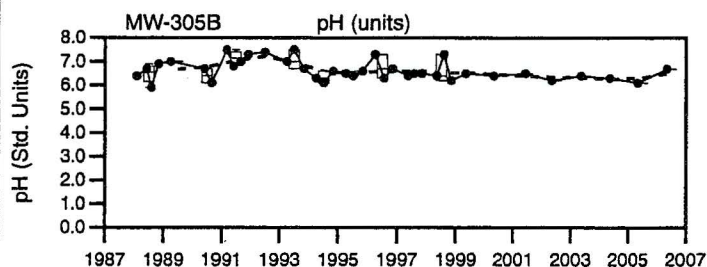
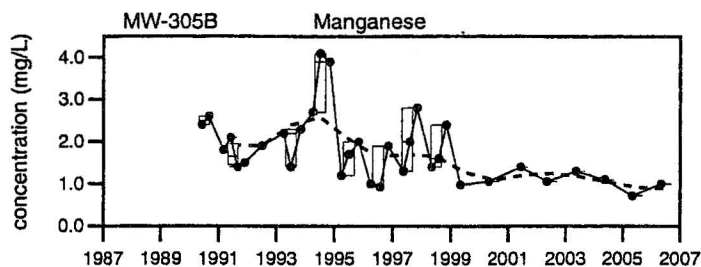
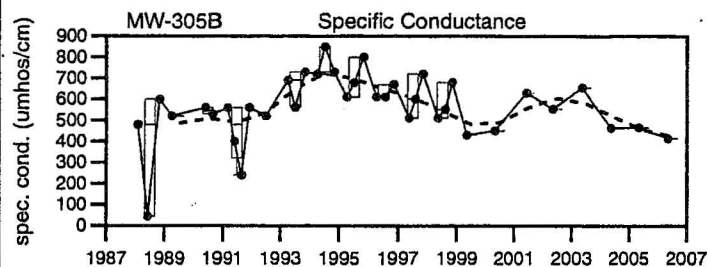
LEGEND



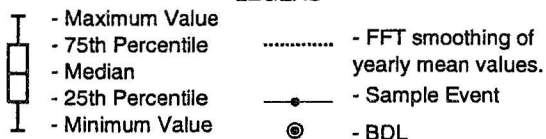
- Sample Event
- BDL

Greenwich - Dummer Yard Landfill LEACHATE

Sevee & Maher Engineers, Inc.

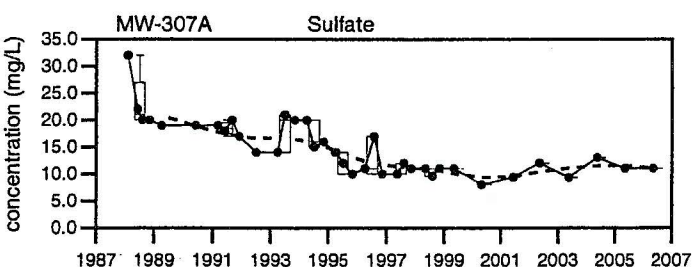
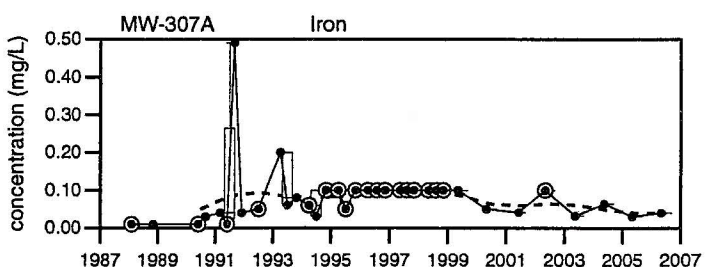
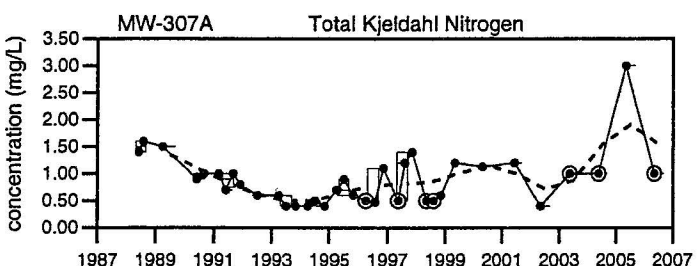
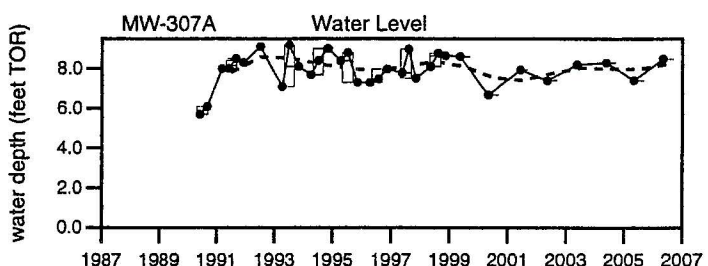
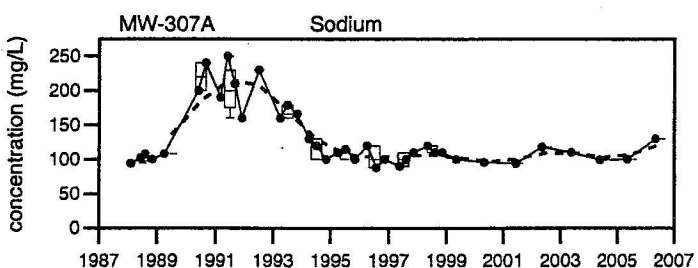
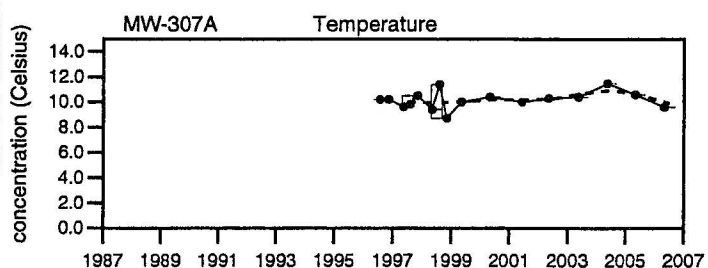
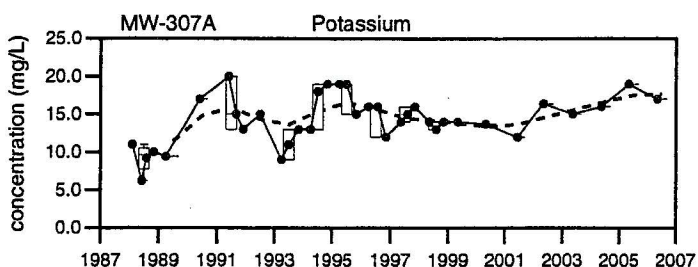
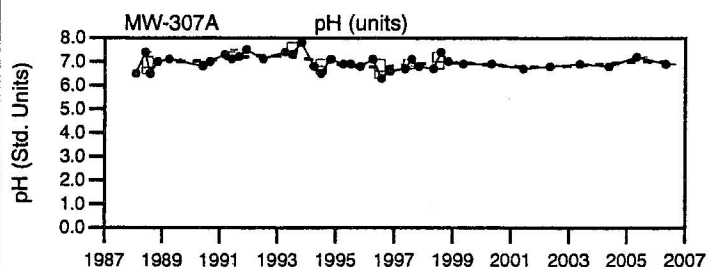
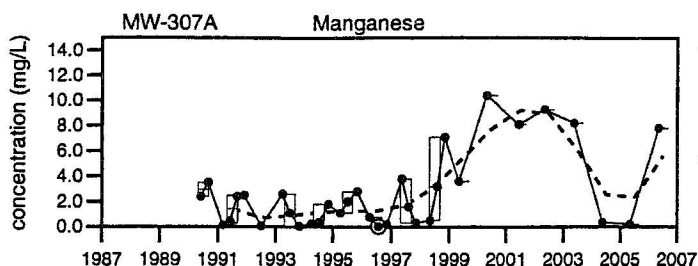
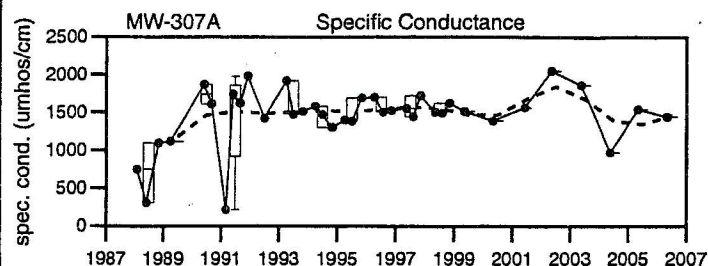


LEGEND

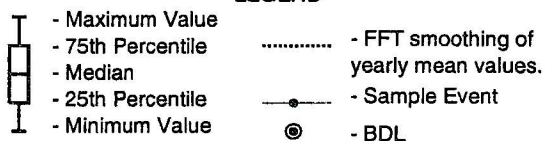


Greenwich - Dummer Yard Landfill MW-305B

Sevee & Maher Engineers, Inc.

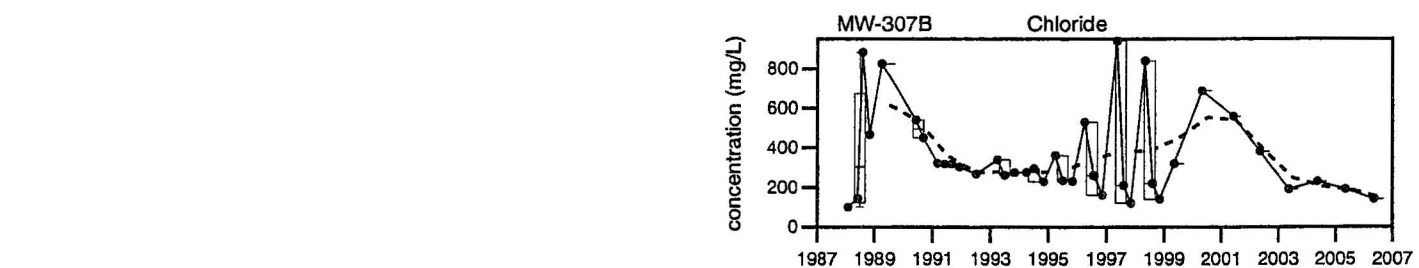
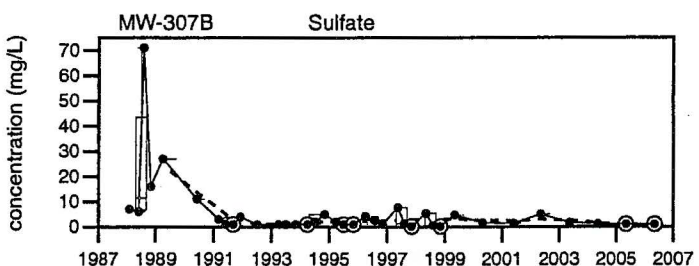
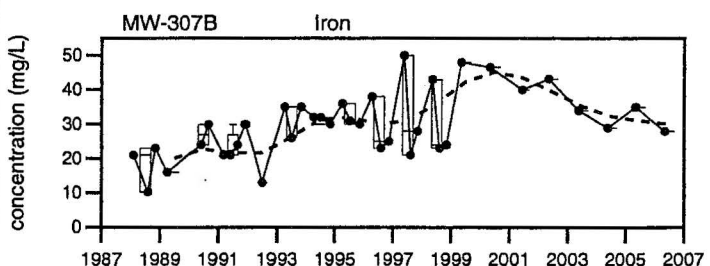
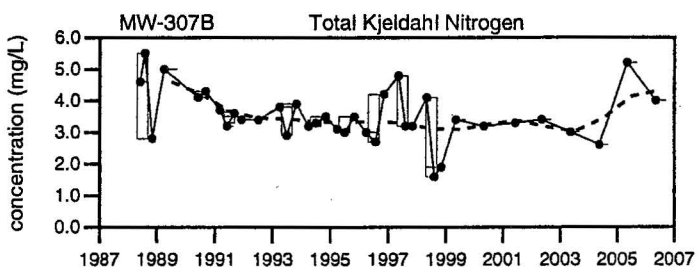
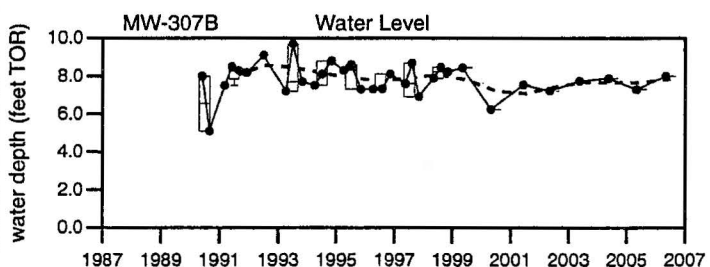
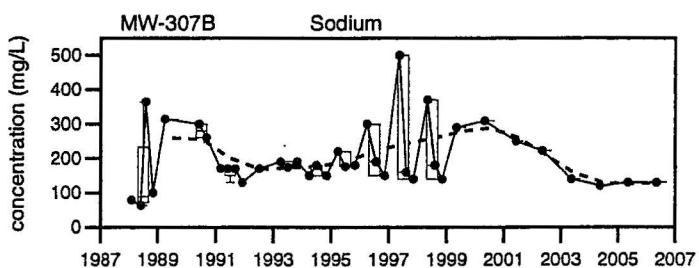
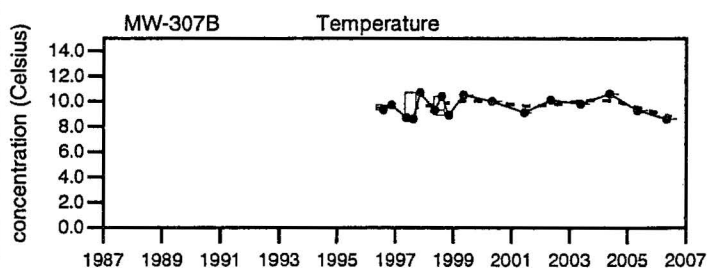
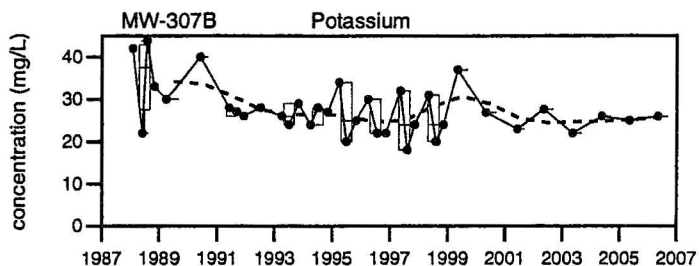
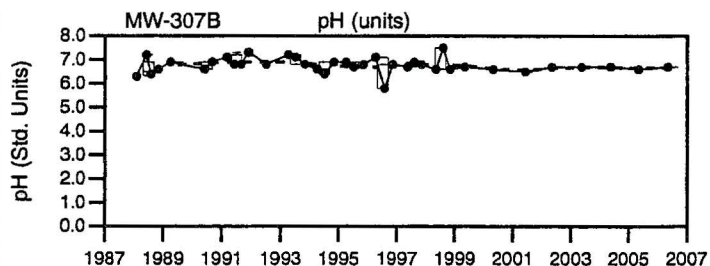
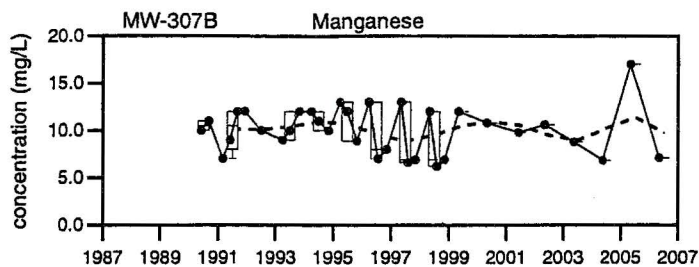
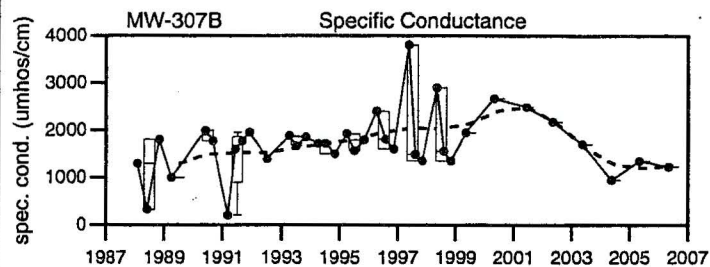


LEGEND



Greenwich - Dummer Yard Landfill MW-307A

Sevee & Maher Engineers, Inc.

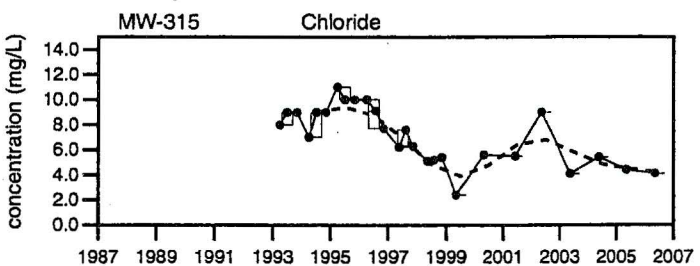
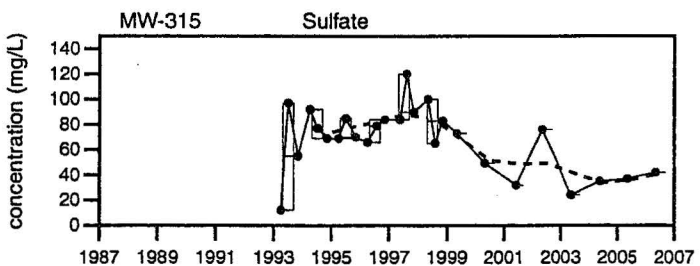
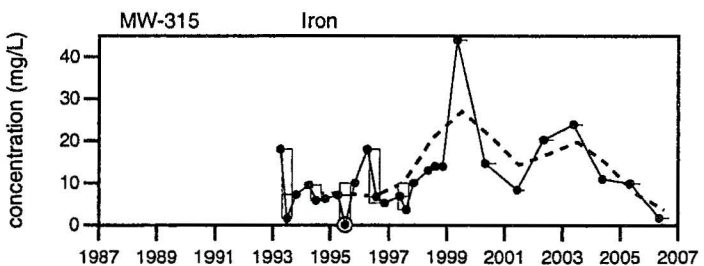
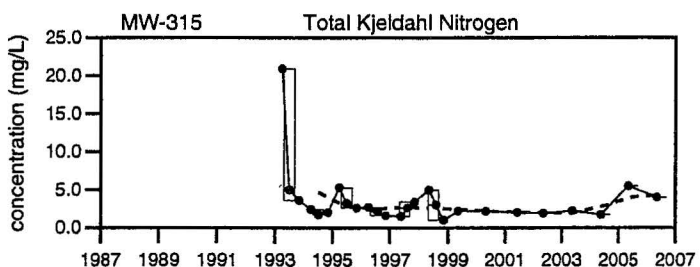
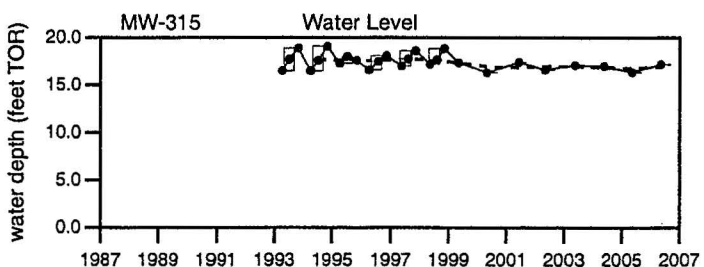
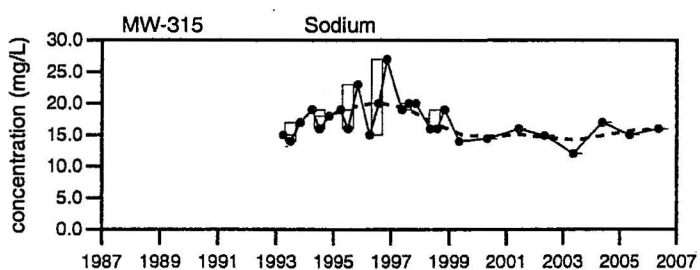
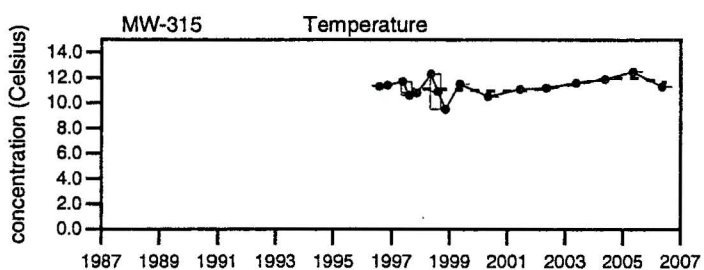
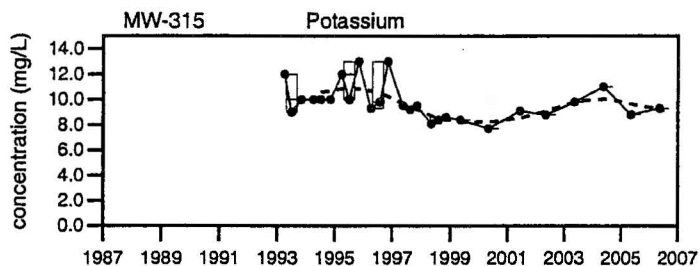
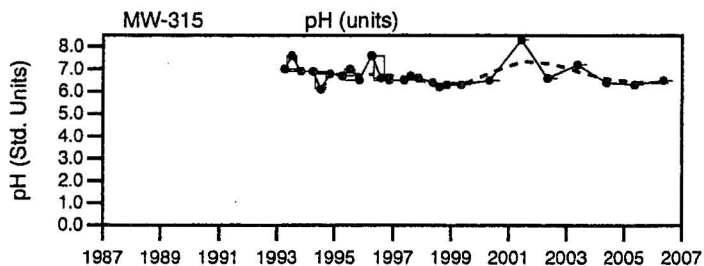
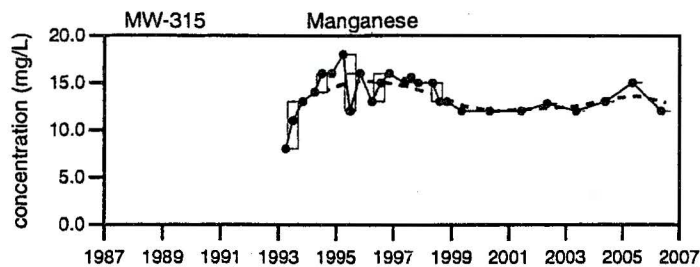
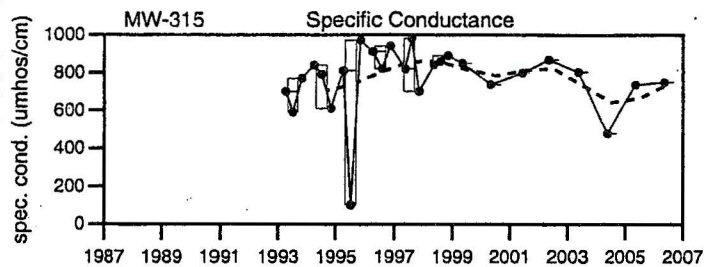


LEGEND

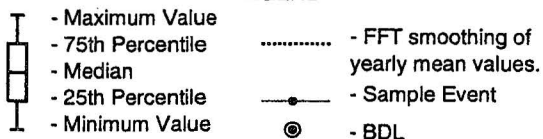
- Maximum Value
- 75th Percentile
- Median
- 25th Percentile
- Minimum Value
- FFT smoothing of yearly mean values.
- Sample Event
- BDL

Greenwich - Dummer Yard Landfill MW-307B

Sevee & Maher Engineers, Inc.

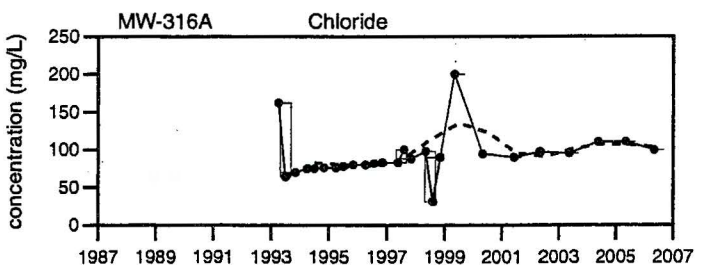
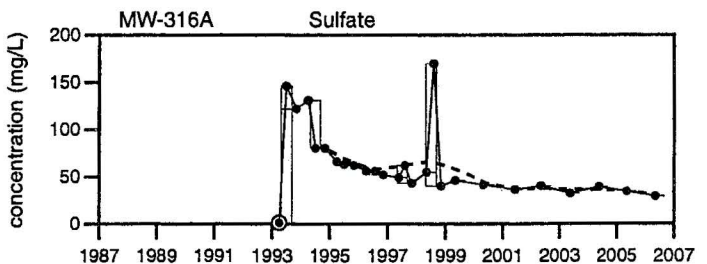
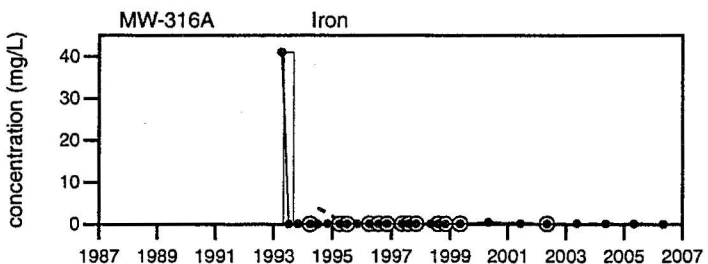
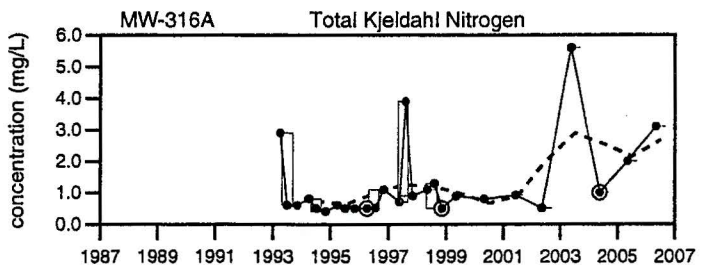
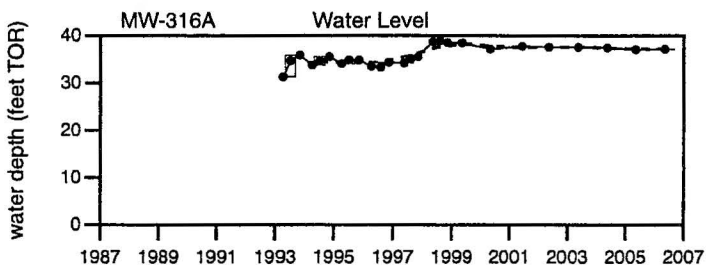
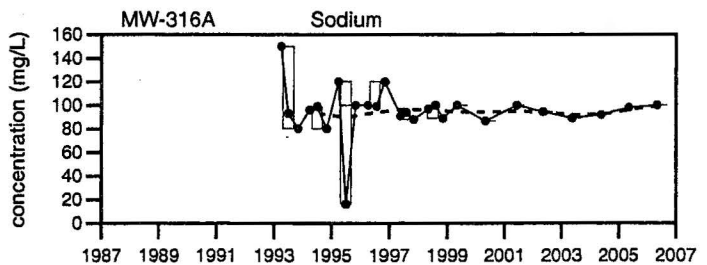
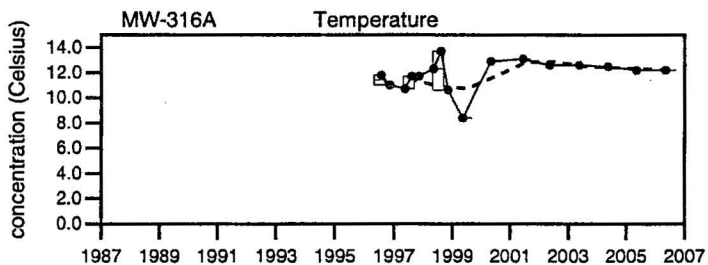
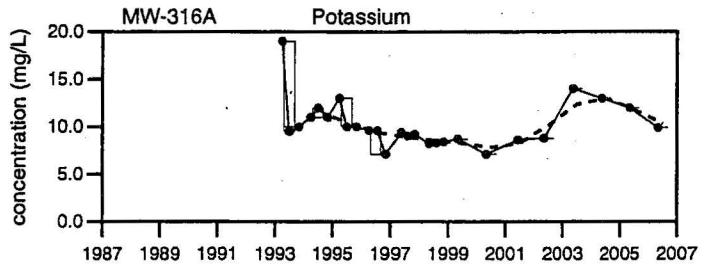
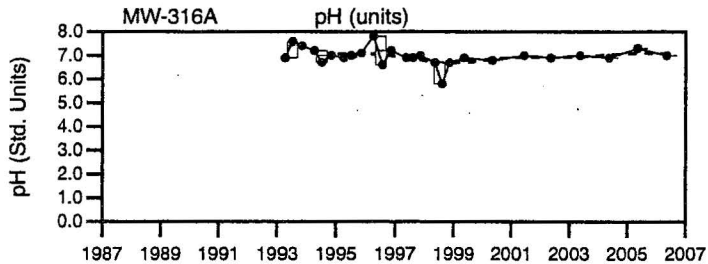
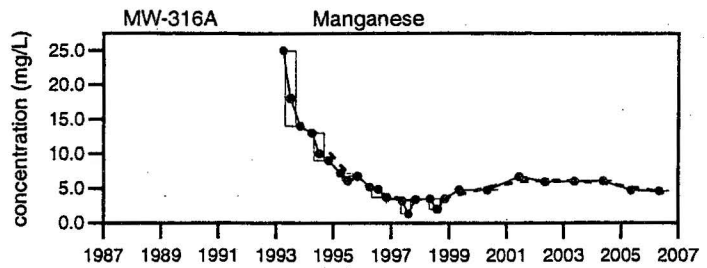
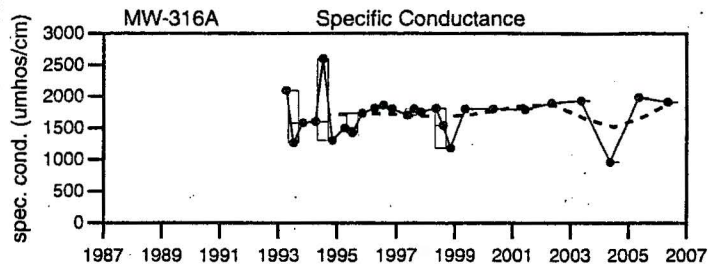


LEGEND



Greenwich - Dummer Yard Landfill MW-315

Sevee & Maher Engineers, Inc.

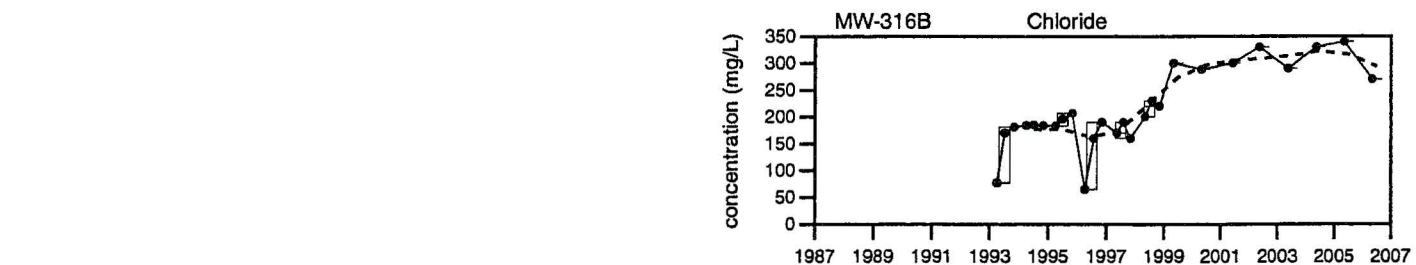
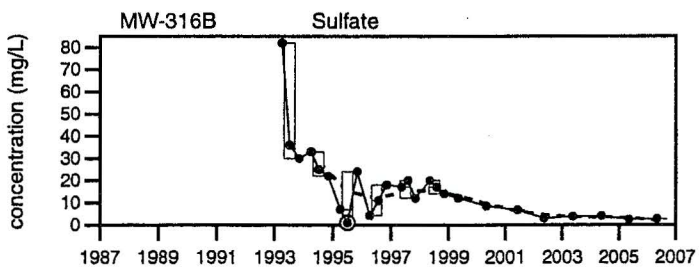
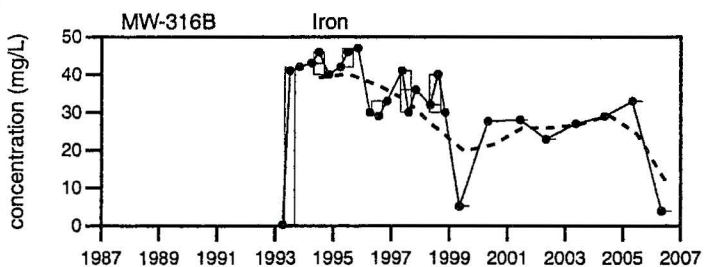
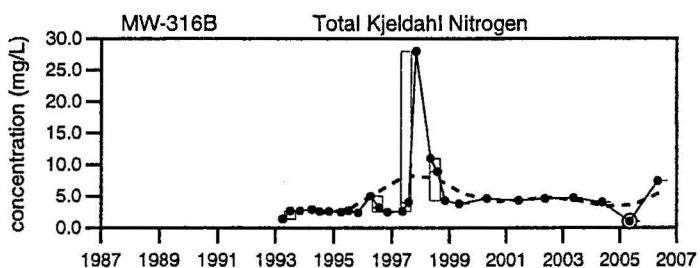
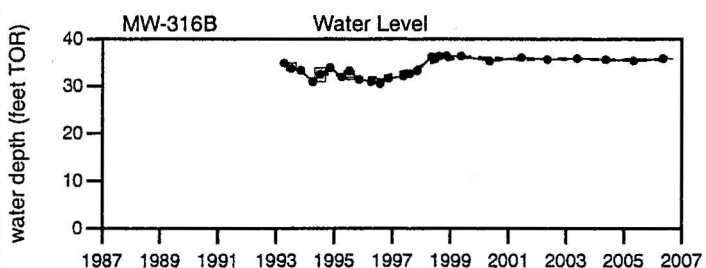
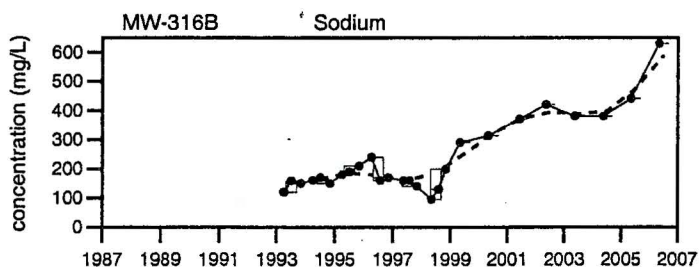
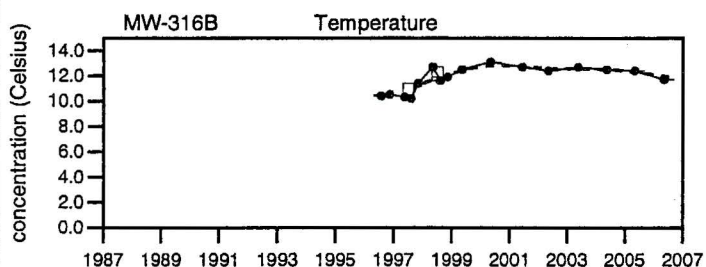
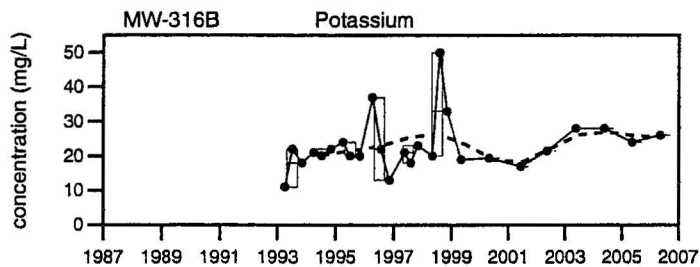
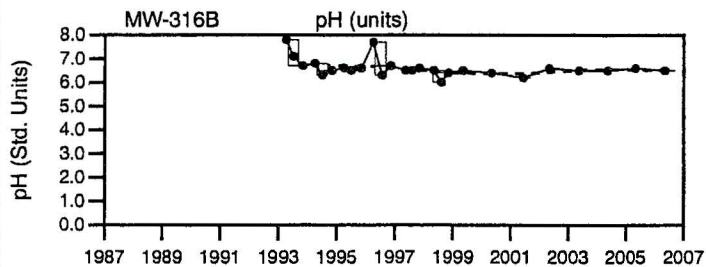
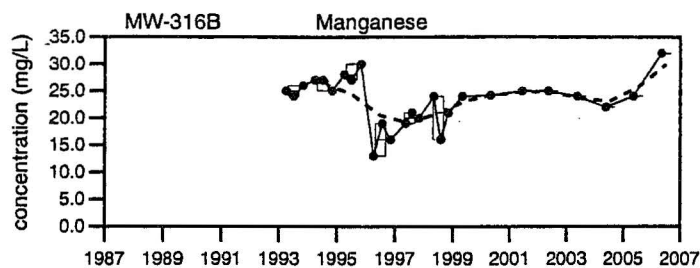
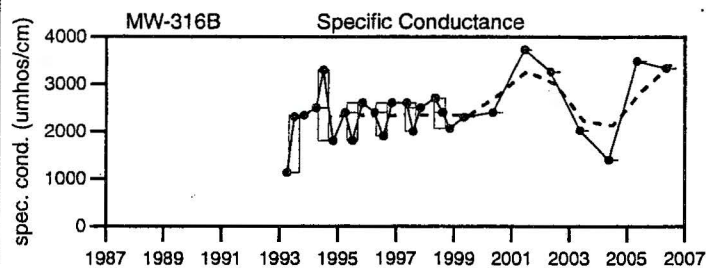


LEGEND

- Maximum Value
- 75th Percentile
- Median
- 25th Percentile
- Minimum Value
- FFT smoothing of yearly mean values.
- Sample Event
- BDL

Greenwich - Dummer Yard Landfill
MW-316A

Sevee & Maher Engineers, Inc.

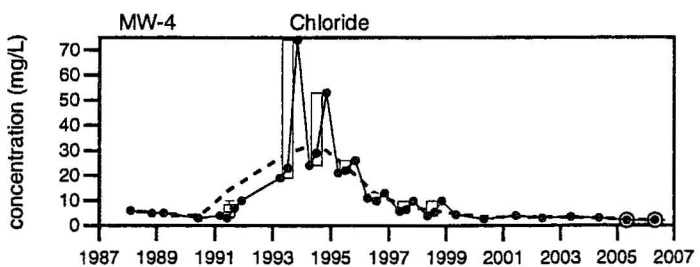
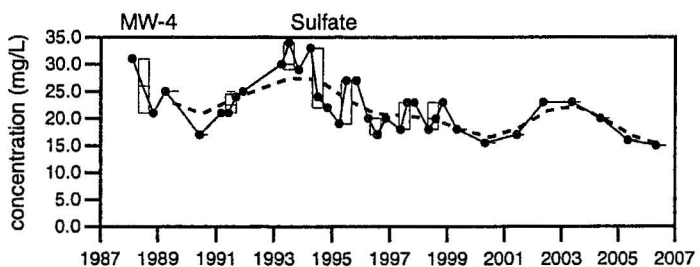
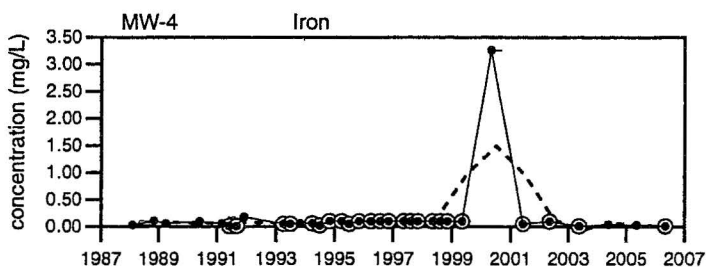
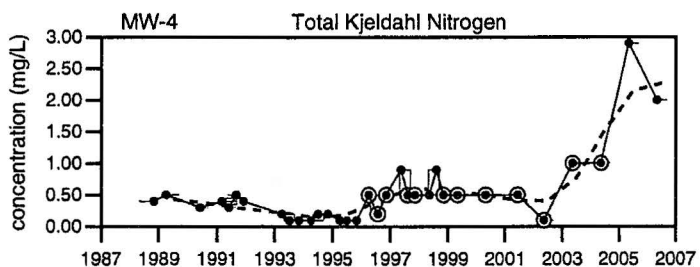
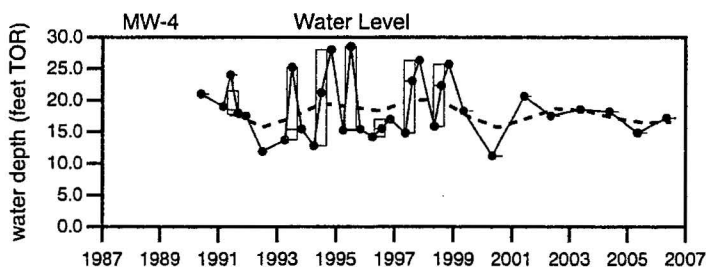
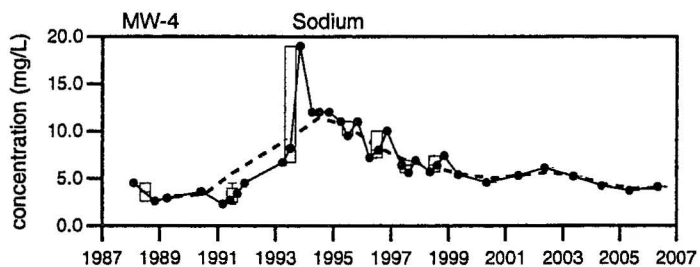
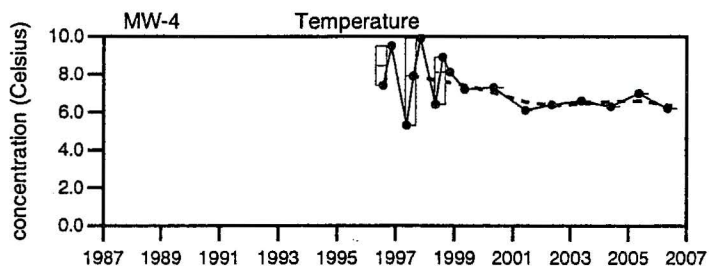
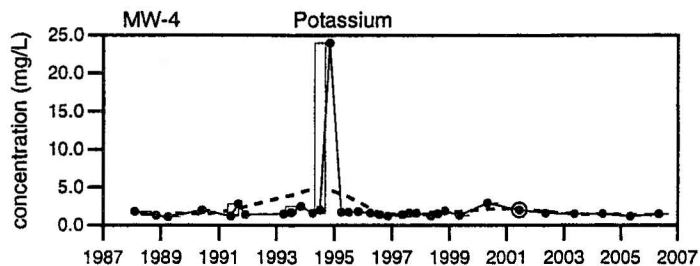
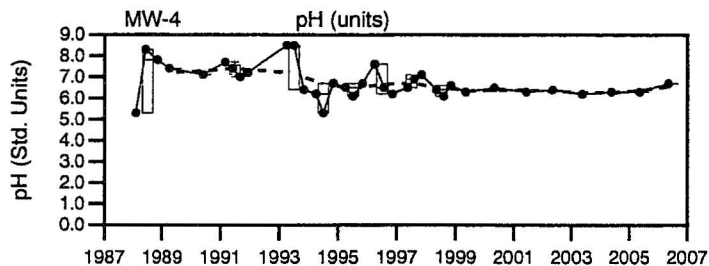
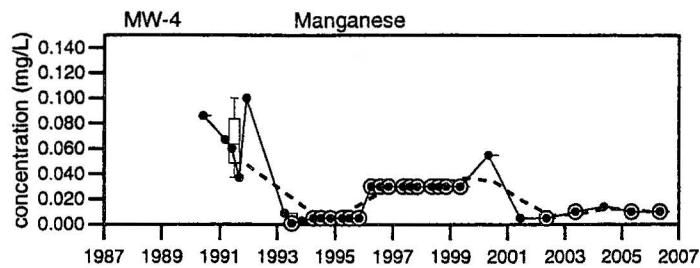
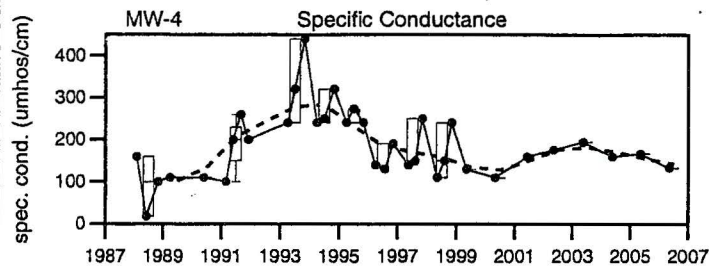


LEGEND

- Maximum Value
- 75th Percentile
- Median
- 25th Percentile
- Minimum Value
- - FFT smoothing of yearly mean values.
- - Sample Event
- ⊙ - BDL

Greenwich - Dummer Yard Landfill
MW-316B

Sevee & Maher Engineers, Inc.

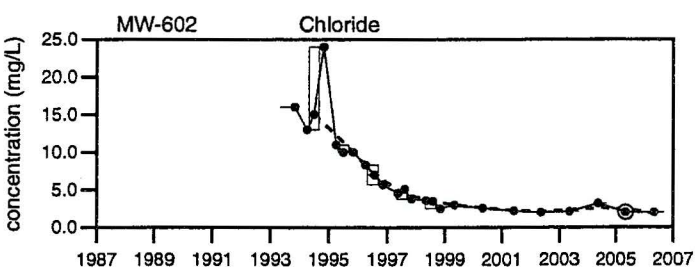
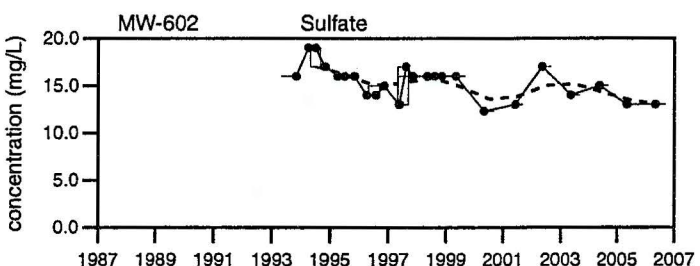
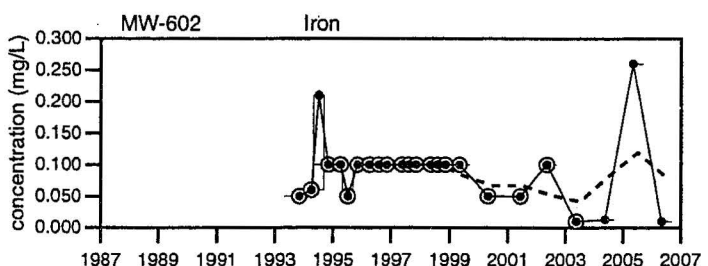
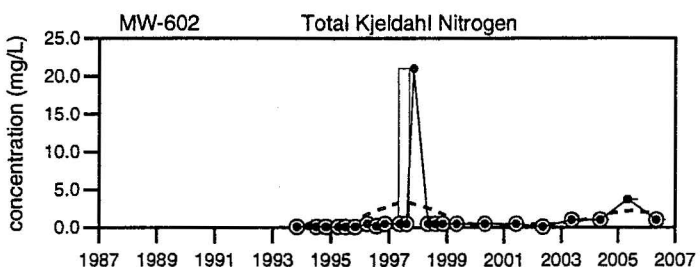
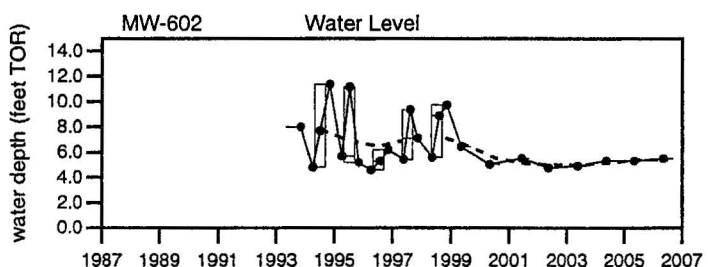
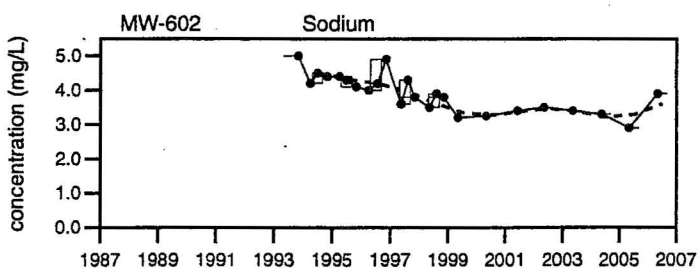
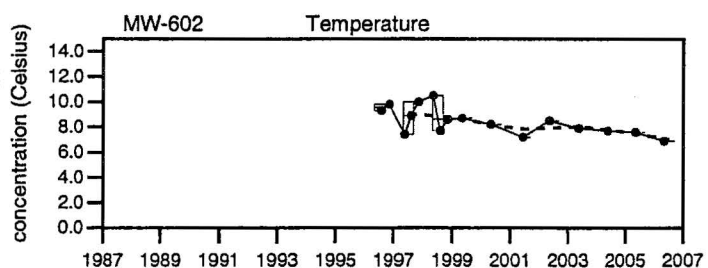
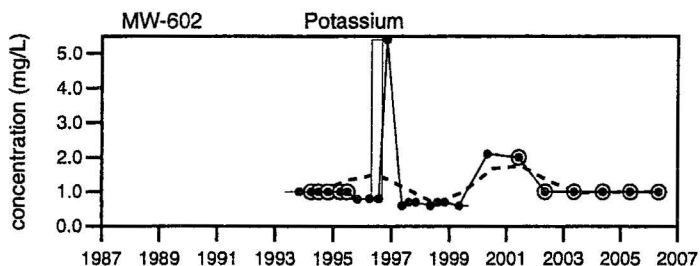
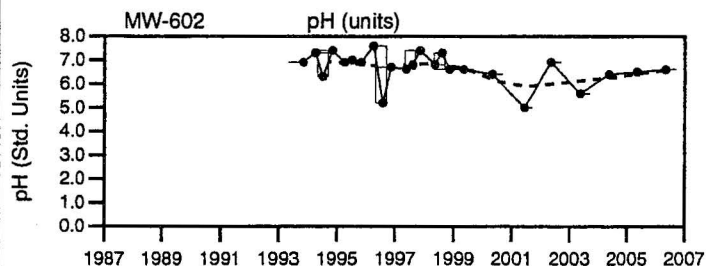
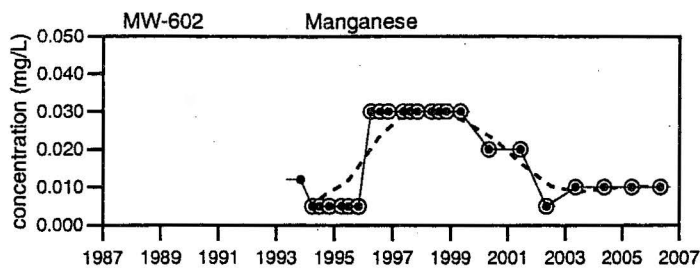
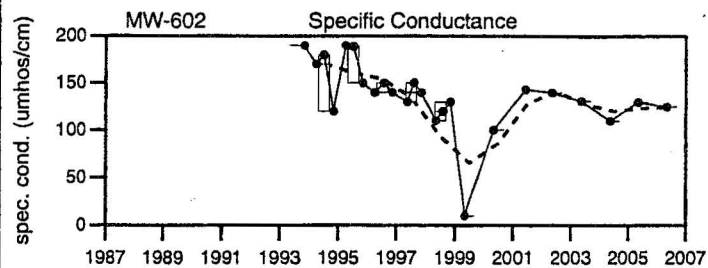


LEGEND

- Maximum Value
- 75th Percentile
- Median
- 25th Percentile
- Minimum Value
- FFT smoothing of yearly mean values.
- Sample Event
- BDL

Greenwich - Dummer Yard Landfill MW-4

Sevee & Maher Engineers, Inc.

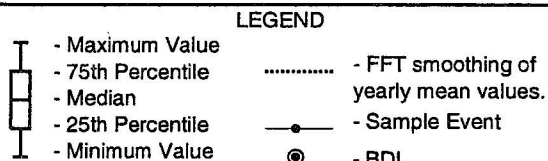
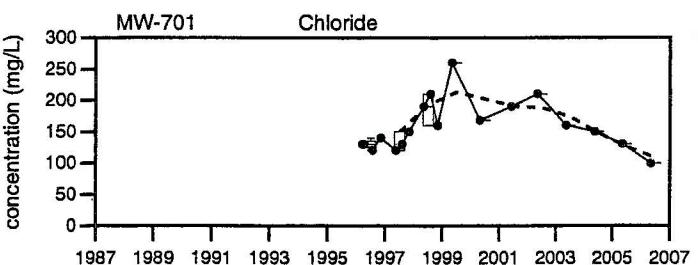
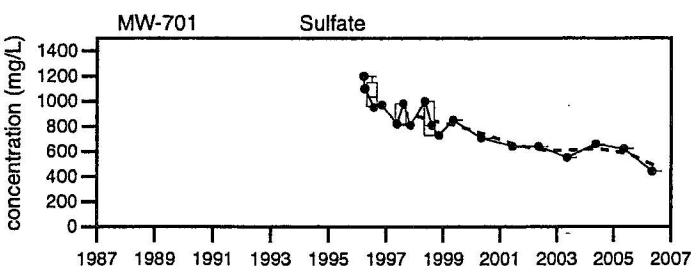
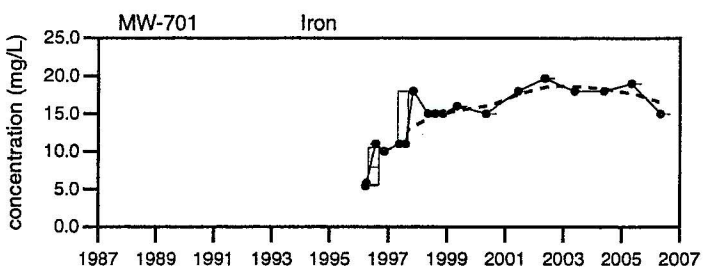
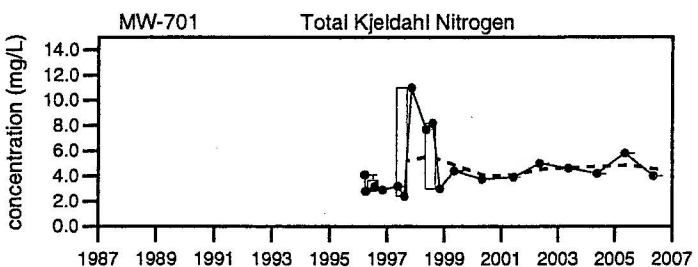
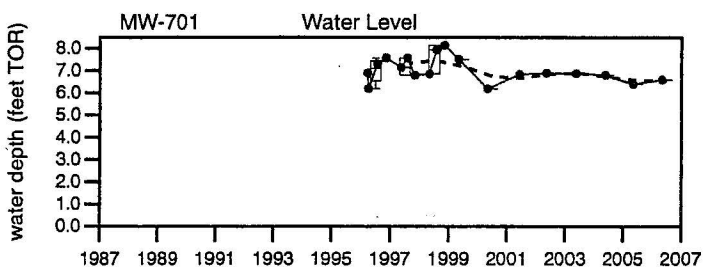
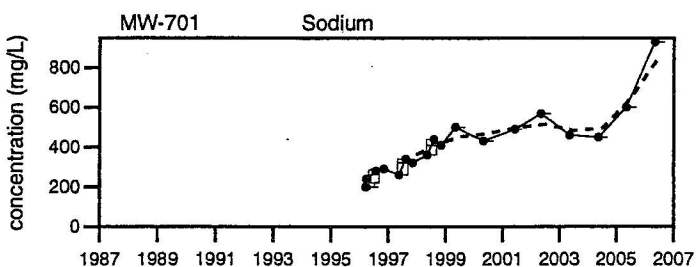
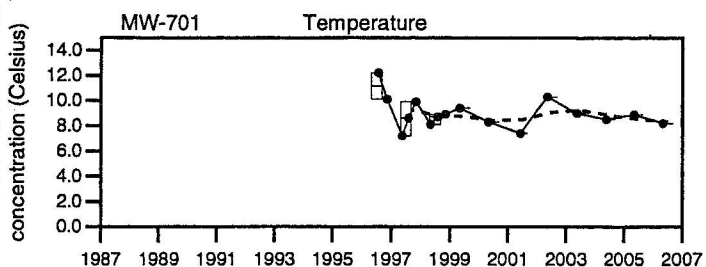
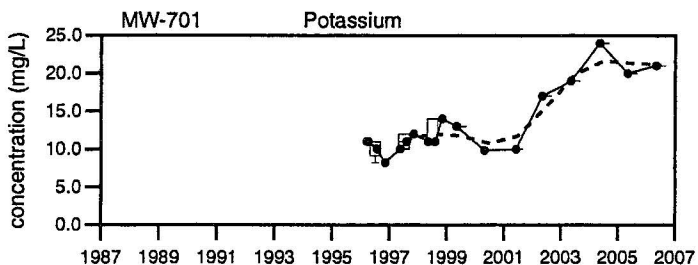
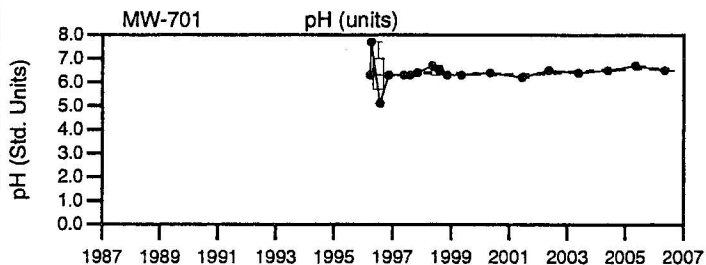
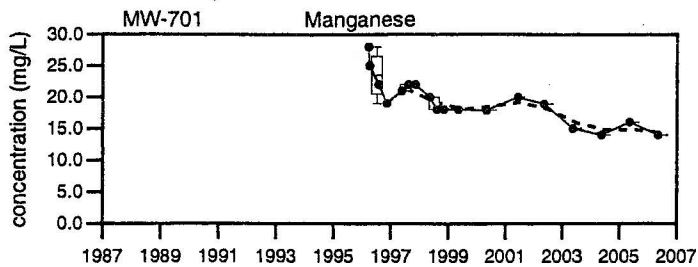
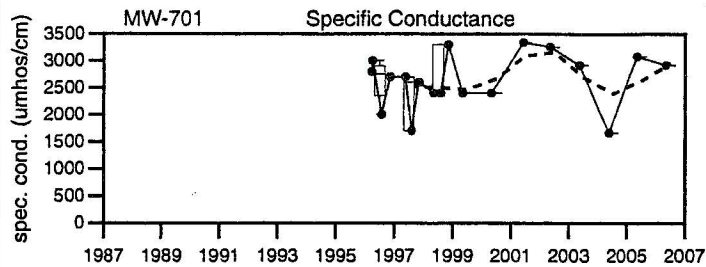


LEGEND

- Maximum Value
- 75th Percentile
- Median
- 25th Percentile
- Minimum Value
- FFT smoothing of yearly mean values.
- Sample Event
- BDL

Greenwich - Dummer Yard Landfill MW-602

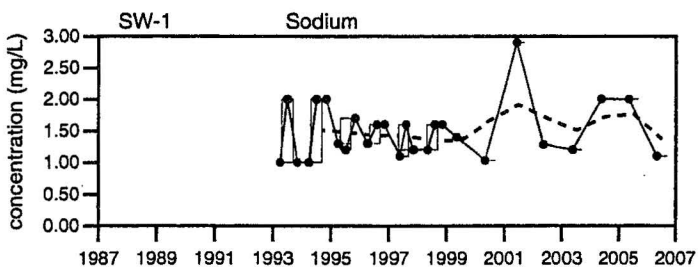
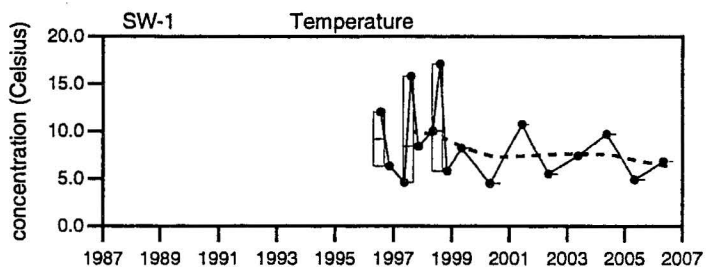
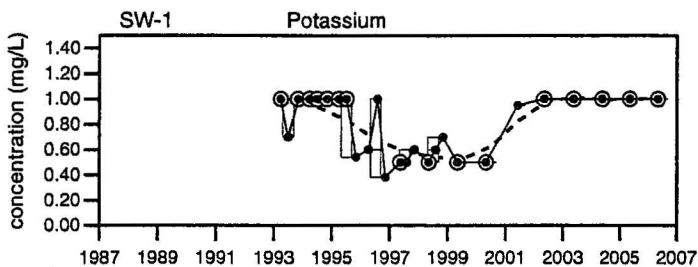
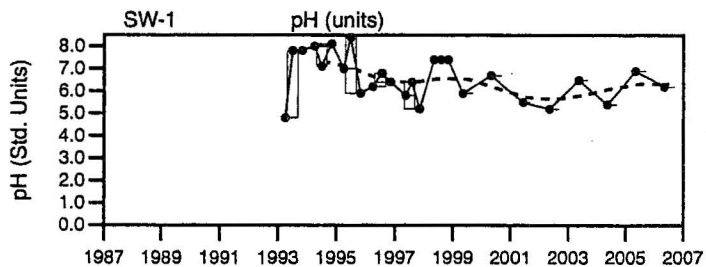
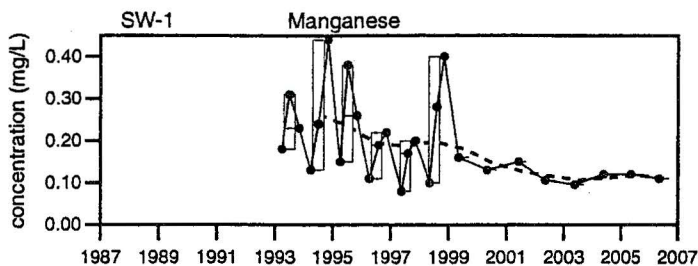
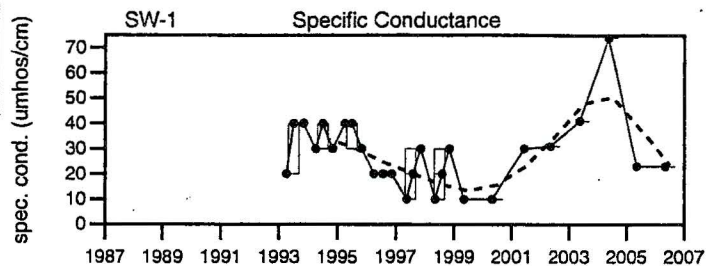
Sevee & Maher Engineers, Inc.



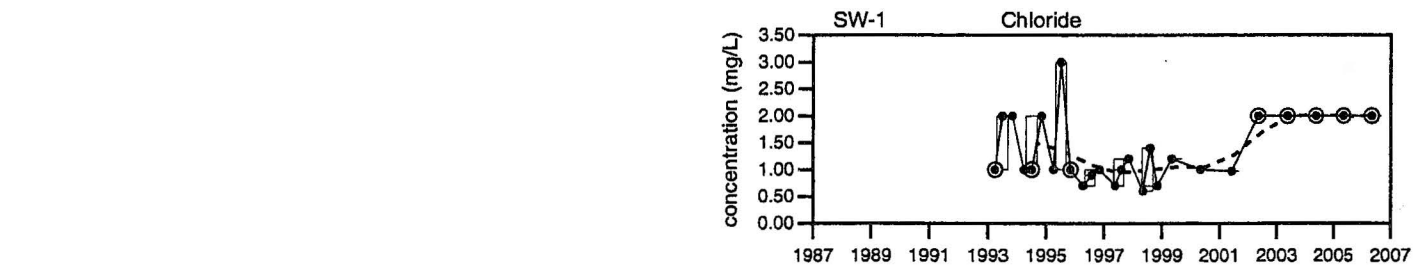
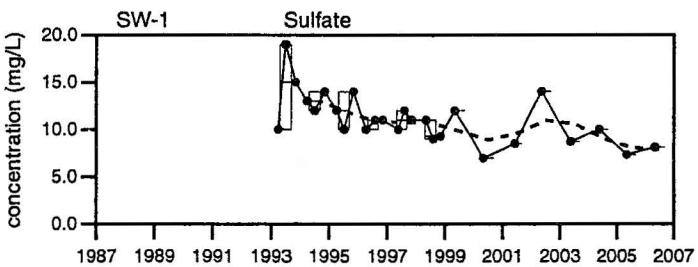
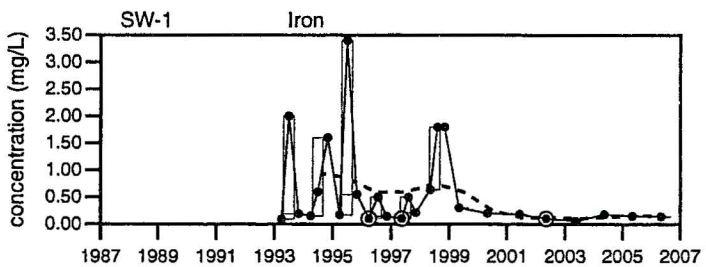
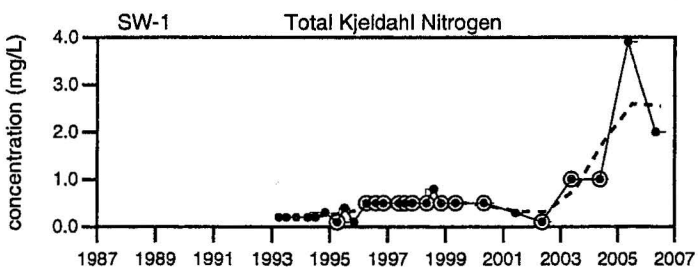
Greenwich - Dummer Yard Landfill

MW-701

Sevee & Maher Engineers, Inc.

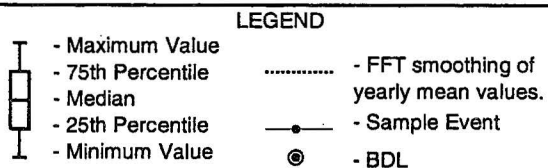


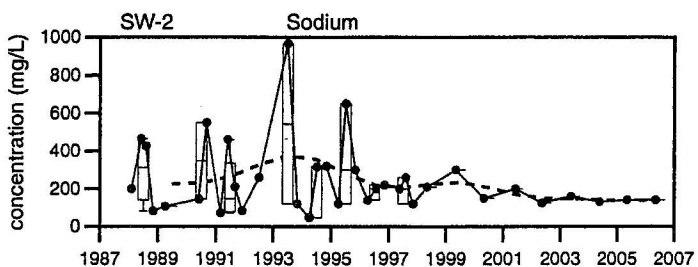
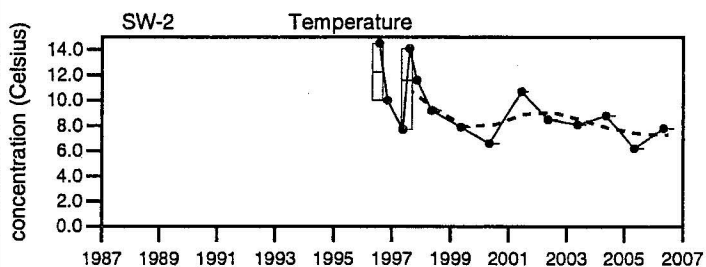
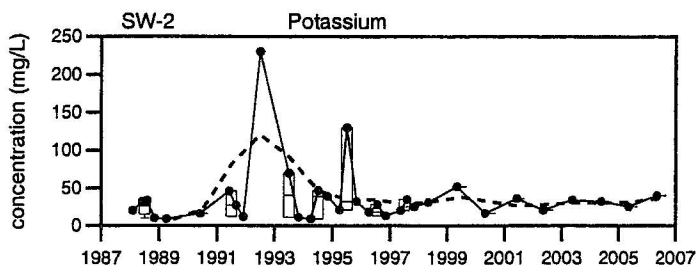
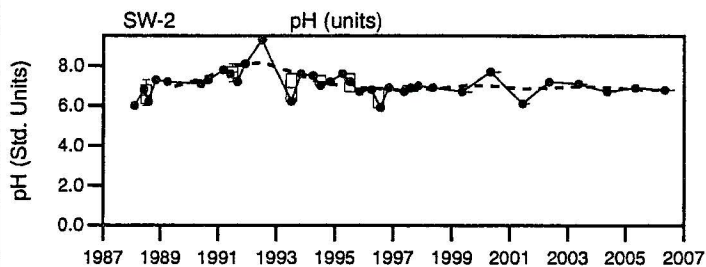
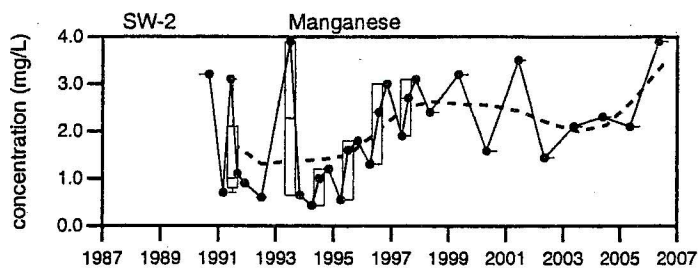
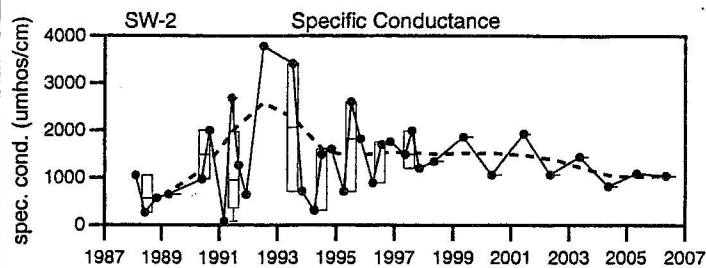
No data for Water Level at SW-1



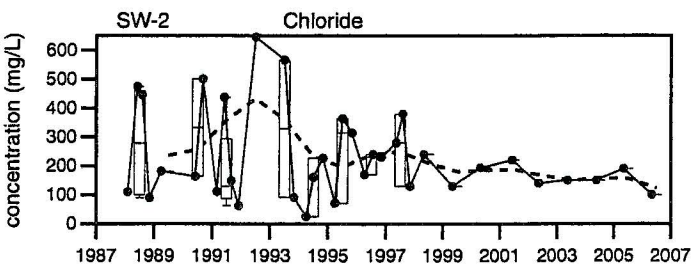
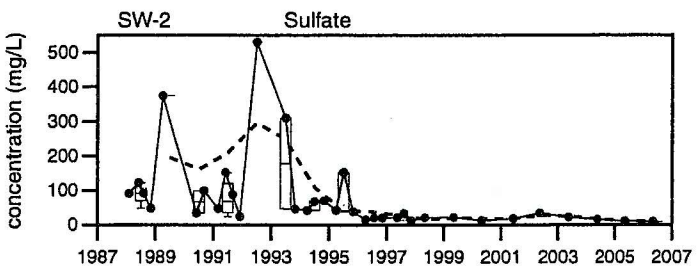
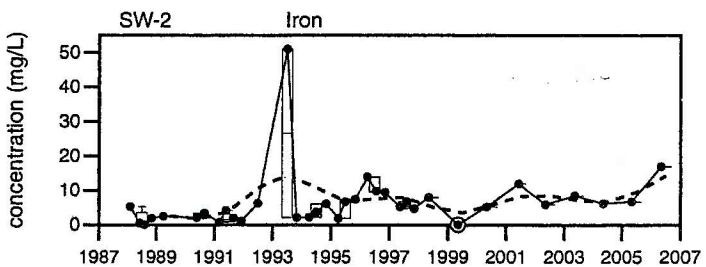
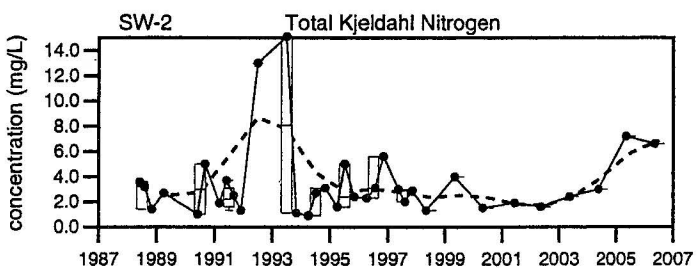
Greenwich - Dummer Yard Landfill SW-1

Sevee & Maher Engineers, Inc.





No data for Water Level at SW-2

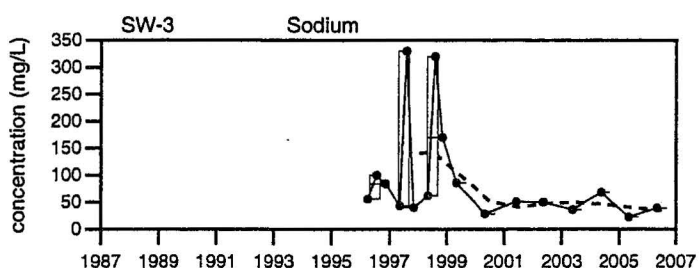
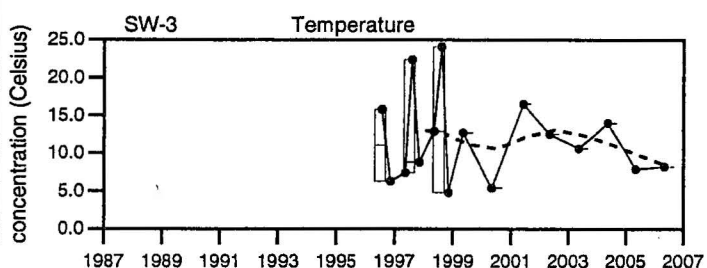
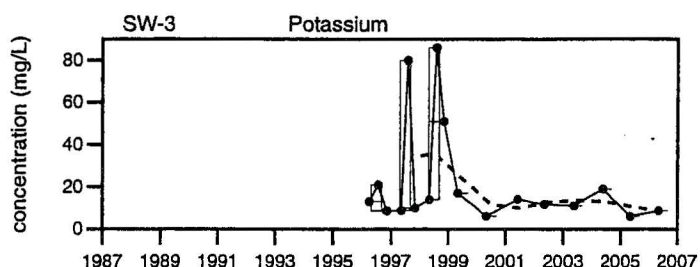
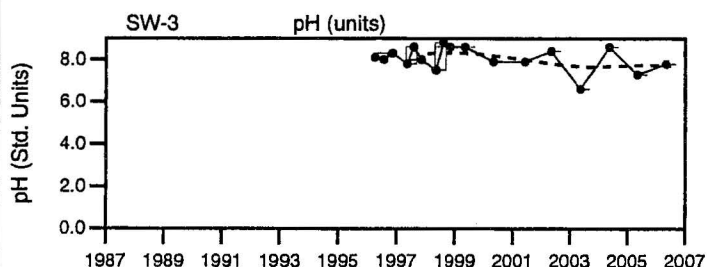
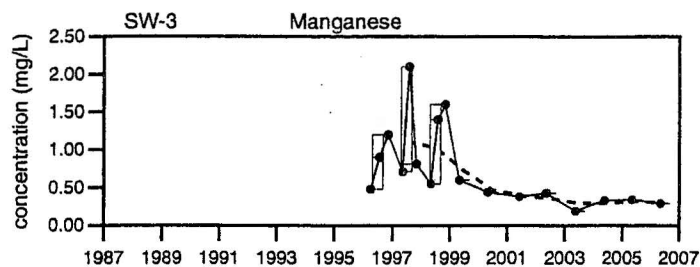
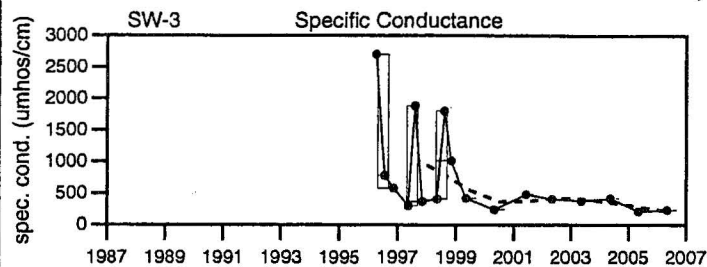


Greenwich - Dummer Yard Landfill SW-2

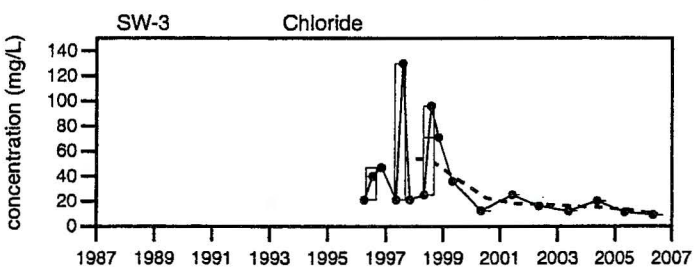
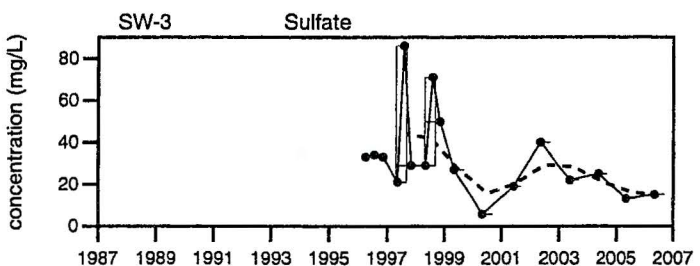
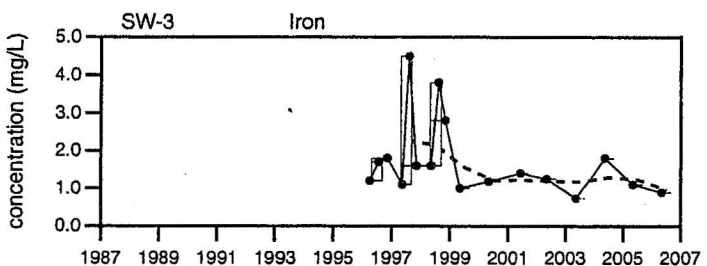
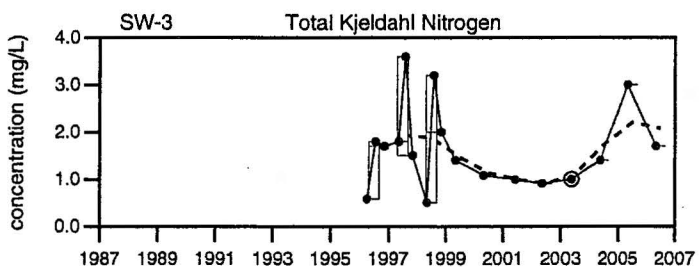
Sevee & Maher Engineers, Inc.

LEGEND

- Maximum Value
- 75th Percentile
- Median
- 25th Percentile
- Minimum Value
- FFT smoothing of yearly mean values.
- Sample Event
- BDL



No data for Water Level at SW-3



LEGEND

- Maximum Value
- 75th Percentile
- Median
- 25th Percentile
- Minimum Value
- FFT smoothing of yearly mean values.
- Sample Event
- BDL

Greenwich - Dummer Yard Landfill
SW-3

Sevee & Maher Engineers, Inc.



Consulting Engineers & Scientists

**SUPPLEMENTAL SITE INVESTIGATION
FURTHER ASSESSMENT OF PCB IMPACTED SOILS**

**T-1 Transformer Site
Berlin, New Hampshire**

Sanborn, Head & Associates

ENGINEERING
EARTH SCIENCES
EVALUATION
DESIGN
IMPLEMENTATION

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TABLES

Table 1: Summary of Analytical Results – Soil

FIGURES

Figure 1: Locus Plan

Figure 2: PCB Concentrations in Soil

Figure 3: Fill Thickness Plan

Figure 4: Inferred Area of PCB Exceedance (>50 mg/kg)

APPENDICES

Appendix A: Limitations

Appendix B: Soil Boring logs

Appendix C: Analytical Laboratory Reports

1.0 INTRODUCTION

In accordance with our Work Plan dated March 23, 2004, Sanborn, Head & Associates, Inc. (SHA) has completed the further assessment of polychlorinated biphenyl (PCB) impacted soils at the T-1 Transformer Site at the Burgess Pulp Mill in Berlin, New Hampshire (Site). The scope of services for this project was approved by the New Hampshire Department of Environmental Services (NHDES) in a letter dated April 6, 2004. This assessment was completed to aid in further assessing the extent of PCB-impacted soils at the Site and serves as an addendum to the Supplemental Site Investigation (SSI) report prepared by SHA dated November 2003. This work was performed under our Contract to Conduct Site Investigation/Remediation Work for NHDES at Contaminated Sites in New Hampshire (Contract), effective July 1, 2003.

This report is subject to the limitations presented in Appendix A.

2.0 BACKGROUND

2.1 Site Description

The Site is a transformer yard located in the western portion of the Burgess Pulp Mill currently owned and operated by Nexfor-Fraser Papers Inc. (Fraser). The yard occupies an approximate 2,650-square foot area surrounded by a chain-link fence and includes a cinder block, electrical switching control house, the concrete T-1 transformer pad and two other concrete pads currently occupied by facility transformers. A pair of overhead utility towers is located directly north of the T-1 transformer pad. With the exception of a relatively small area to the north of the control house and T-1 transformer pad, the yard is covered with asphalt pavement.

A 3- to 4-foot high concrete berm borders the yard to the north. North of the concrete berm is a steep vegetated area which slopes down on the order of 20 feet to the top of 20- to 30-foot high bedrock outcrops which constitute the southern bank of the Androscoggin River (note at this location the River flows generally from east to west [see Figure 1]). The total distance from the berm to the bank of the River is about 50 feet. A large spill tank (a.k.a. black liquor tank) and associated pump house are located about 30 feet west of the control house and numerous other mill facility buildings are located to the south and east of the yard. According to Fraser records, the main Kraft system trench, a 15- to 20-foot deep cut into bedrock which contains the facility sewer line, is located within approximately 10 to 20 feet east of the yard fence line.

A project locus plan showing general topographic and regional features is provided as Figure 1. Figure 2 depicts prominent Site features.

2.2 Previous Observations

Between June and September 2003, SHA completed a Supplemental Site Investigation (SSI) which included review of historical information, collection of groundwater quality samples from Site monitoring wells, coordination of a utility clearance survey, performance of a geologic reconnaissance and completion of a soil boring and sampling program to further assess the horizontal and vertical extent of PCB-impacted soils at the Site. The investigation was

performed as an initial phase of work to assess the current conditions at the Site, propose an acceptable PCB cleanup concentration for the Site and establish a plan to remediate PCB contamination identified in the "Agreement for Addressing PCB contamination at the T-1 Transformer Area" (Agreement), executed by Fraser, USEPA and NHDES on May 30, 2002.

Based on observations made during the SSI, Site soils appear to consist primarily of fill, specifically, a black ash/fine to medium sand mixture with lesser amounts of gravel. The fill thickness at the yard (based on boring refusal) ranged from 5.3 feet south of the T-1 transformer pad to approximately 15 feet northwest of the transformers currently located at the yard. The black ash/sand unit was observed to range in thickness from less than one foot to as much as 12 feet (in the vicinity of MW-3D) and was commonly overlain by a brown, fine to coarse silty sand with trace gravel. Where it was not observed to directly overlie bedrock, the black ash/sand unit was underlain by a relatively thin reddish-brown sand and silt unit with trace gravel which commonly contained construction-related debris. The bedrock present at and in the vicinity of the Site is a coarse-grained to massive monzonite commonly displaying gneissic banding.

Based on results of PCB analysis of soil samples collected during the SSI, the presence and concentration of PCB-impacted soils varied (laterally and vertically) greatly across the Site but generally indicated three areas of elevated impact: northwest of the northernmost transformer currently located at the yard, north of the control house along the sidewalls of the previously excavated area, and west of the control house. Overall, shallow soils at the Site displayed a more widespread lateral distribution of PCB concentrations exceeding NHDES S-1, S-2 and/or S-3 standards with highest concentrations of 140 to 202 milligrams per kilogram (mg/kg) detected in borings located northwest of the northernmost transformer located at the yard. PCB concentrations observed in shallow soils decreased towards the steep sloping area north of the yard. Although PCB impacts to intermediate and deeper soils appeared limited (laterally) to areas northwest of the northernmost transformer at the yard, along the sidewalls of the previously excavated area, and west of the control house, the PCB concentrations observed in deeper soils were generally higher than those observed in shallow soils. The highest concentrations of PCB observed in deep and intermediate soils were 6,856 mg/kg from a depth of about 10 feet below ground surface (bgs) along the sidewalls of the previously excavated area and 31,000 mg/kg in soils between 7 and 9 feet bgs at boring SB-8 located northwest of the northernmost transformer.

Consistent with historical observations, water level monitoring performed at the Site as part of the SSI indicated that groundwater flow is generally to the north-northwest towards the Androscoggin River. Additionally, groundwater quality sampling indicates that PCBs are present in groundwater at some monitoring well locations at generally low concentrations ranging from less than the laboratory reporting limit to 10 micrograms per liter ($\mu\text{g/l}$) in monitoring well MW-1D.

The findings of our investigation (including a review of historical data) and recommendations for the Site were summarized in a report titled "Supplemental Site Characterization, T-1 Transformer Site, Berlin, New Hampshire" dated November 10, 2003.

In a meeting held on March 12, 2004, attended by representatives of NHDES, USEPA, Fraser and SHA, and in a letter prepared by NHDES dated March 26, 2004, the PCB concentration agreed to as acceptable to remain in place was 50 mg/kg or less. As such, this concentration will be used to target soils requiring excavation and removal. Consistent with the findings of the SSI, additional soil sampling has been completed in specific areas of the Site to aid in further assessing the extent of PCB-impacted soils which may exceed the 50 mg/kg criterion.

3.0 OBJECTIVES AND SCOPE OF SERVICES

The objective of our work was to further assess the extent of PCB-impacted soils which exceed the 50 mg/kg criterion agreed to during the March 12, 2004 meeting. In accordance with this objective, our scope of work included completion of the following tasks:

- Completion and logging of 7 soil borings using direct push techniques with continuous soil "profile" characterization;
- Analysis for PCBs of up to three soil samples from each boring location (number of soil samples collected per boring varied based on total advancement depth of boring); and
- Preparation of this report, which includes a summary of our findings, documents field activities, and provides an updated estimate of the volume of soils which exceed the 50 mg/kg criterion.

4.0 FIELD AND ANALYTICAL PROGRAM

Test borings were performed by Eastern Analytical Inc. (EAI) of Concord, New Hampshire, and observed and logged by SHA. Seven test borings, designated SB-19 through SB-25, were advanced on April 7, 2004 at the approximate locations depicted on Figure 2. Test borings located to the west of the control house were advanced to refusal depths of approximately 3.5 and 4.5 feet bgs. Test borings located in the northern portion of the Site were advanced to refusal depths of 13 to 15 feet bgs. Test boring logs are provided in Appendix B.

Overburden test borings were advanced by EAI using a Simco-Earthprobe 200 truck-mounted rig with a Geoprobe® MC Sampler. The sampler extracts continuous 4-foot soil samples contained in disposable, 2-inch outer diameter (OD) polyvinyl chloride (PVC) liners that are replaced with each successive 4-foot advancement. Soil samples were collected from the liners and placed in laboratory provided, 4-ounce glass jars. Boring and soil sampling procedures were observed and soil samples were classified by SHA. The MC Sampler was washed with a solution of water and non-phosphorous detergent between sample collections.

After the PVC liners were initially opened, soil samples were screened in the field for VOCs using a Photovac Model 2020 Photoionization Detector (PID) equipped with a 10.6 eV lamp by running the PID over the entire sample and recording meter detections. Small portions of each

4-foot sample were then placed in a Ziploc®-type bag and screened to represent the "bulk" PID measurement. The PID measures relative levels of VOCs referenced to an isobutylene-in-air standard. Although PID screening cannot be used directly to quantify VOC concentrations or identify individual compounds, the results serve as a relative indicator of the presence of VOCs in each sample. Field screening results for total VOCs are recorded on the boring logs.

After collecting and screening soil samples, up to three samples from each boring were selected for laboratory analysis. Samples were designated as shallow, intermediate, and deep, corresponding to depths of about 0-1, 7-9, and 12-14 feet bgs, respectively. Where borings encountered shallow refusal (presumably bedrock), the second (deeper) sample was generally collected from a 1- to 2-foot interval just above refusal. Soil samples were submitted to EAI for PCB analysis by USEPA Method 8082.

QA/QC procedures included collection and analysis for PCBs of one blind field duplicate from test boring SB-21. The soil samples were transferred from the Site to EAI in an ice-containing cooler using standard chain-of-custody protocols. The analytical laboratory reports and chain-of-custody records are provided in Appendix C.

5.0 FINDINGS

5.1 Site Soil Conditions

Consistent with observations made during the SSI, Site soils appear to consist primarily of fill dominated by a black ash/fine to medium sand mixture. The black ash unit was observed at each of the seven boring locations ranging in thickness from approximately 2.5 feet at SB-23 west of the control house to about 9.5 feet at location SB-21 west of the northernmost transformer at the yard. The black ash/sand unit was overlain by a brown, fine to coarse silty sand with some gravel and trace construction debris (brick fragments) and commonly underlain by a relatively thin (1 to 3 feet) layer of brown, fine to coarse silty sand or reddish-brown to gray silt unit with little sand and trace gravel. The black ash/sand unit was observed to directly overlie bedrock at boring locations SB-23 and SB-24 (west of the control house).

Based on the depth to refusal, the thickness of the fill at the new locations generally agree with the trends in the inferred thickness of fill across the Site observed during the SSI. Specifically, the fill thickness was observed to range from 13 to 15 feet at borings SB-19, SB-20, SB-21, SB-22 and SB-25 located northwest of the northernmost transformer in the yard and relatively thin fill (boring refusals of 3.5 to 4.5 feet bgs) was observed in the vicinity of borings SB-23 and SB-24 located west of the control house, consistent with observations at borings SB-13 through SB-15 which indicate thinning of fill in that portion of the Site. Soil boring locations are shown on Figure 2 and an inferred fill thickness contour plan is presented as Figure 3.

5.2 Soil Analytical Results

Twenty soil samples collected from the new soil borings were analyzed for PCBs. As with the boring program performed in support of the SSI, two or three soil samples were analyzed from each of the seven boring locations; where practicable, the soil samples were collected from three targeted depth intervals: a shallow soil sample from the 0.5-foot interval immediately below the layer of asphalt covering the majority of the Site; an intermediate soil sample from approximately 7 to 9 feet bgs; and a deep soil sample from the 1- to 2-foot interval overlying bedrock. Soil analytical results are summarized in Table 1, and presented (with historical soil analytical results) on Figure 2.

As shown on Figure 2, the PCB concentration observed in shallow soils exceeded the 50 mg/kg criterion at four locations (SB-20, SB-21, SB-24 and SB-25). PCB concentrations detected in shallow soil samples ranged from 9.1 mg/kg at SB-19 to 130 mg/kg at SB-21 and SB-24. In contrast, no soil samples collected from intermediate depths exceeded the 50 mg/kg criterion with PCB concentrations observed in soil samples collected from intermediate depths ranging from less than the laboratory detection limit at SB-23 to 8.8 mg/kg at SB-25. The PCB concentration detected in the deep soil sample collected from boring SB-20 at a depth between 12.5 and 14.5 feet bgs was the highest observed among the seven boring locations, 10,000 mg/kg. This soil sample was collected from the two-foot interval above boring refusal in the reddish-brown fine to coarse sand unit which was commonly observed below the black ash unit at the Site. The PCB concentrations detected in the remaining deep soil samples were all less than 1 mg/kg.

6.0 CONCLUSIONS

As stated above, the objective of our work was to further assess the extent of PCB-impacted soils which exceed the 50 mg/kg criterion identified in NHDES' March 26, 2004 letter by collecting additional soil samples in the vicinity of areas previously observed to contain elevated concentrations of PCBs. As such, Figure 4 presents the inferred extent of PCB-contaminated soils at the Site which may exceed the 50 mg/kg criterion based on soil sample results from historical Site investigations, the SSI completed by SHA in 2003, and the supplemental boring program performed in April 2004. Consistent with previous results, soils requiring excavation and removal based on the 50 mg/kg criterion and results of soil sampling and analyses include deeper soils located along the sidewalls of the previously excavated area; shallow, intermediate and deep soils to the northwest of the previously excavated area (near SB-8, SB-9, SB-20, SB-21 and SB-25); and shallow and intermediate soils west of the control house (near SB-15 and SB-24). In addition, due to the observation of deeper PCB-impacted soils in excess of the 50 mg/kg criterion adjacent to (east and west of) the two transformers located north of the control house (specifically the PCB concentrations detected in deeper soils at borings T-1 SSW, SB-18 and SB-20), excavation activities should include removal of soils underlying the transformers. Based on the inferred areal extent of soils containing greater than 50 mg/kg of PCBs depicted on Figure 4, the estimated volume of soil which would require remediation is approximately 150 cubic

yards. This estimate assumes excavation of shallow soils exceeding the 50 mg/kg criterion (highlighted in green on Figure 4) to a depth of 3 feet below ground. Areas where intermediate and deep soils are inferred to exceed the 50 mg/kg criterion (indicated by red and purple shading, respectively, on Figure 4) would be excavated from ground surface to the bedrock surface, or, in the case of deeper soils along the sidewalls of the previously excavated area, from a depth of 5 feet to the bedrock surface. Soils underlying the two transformers north of the Control House that are inferred to be underlain by soils exceeding the 50 mg/kg criterion would be excavated from the base of the concrete transformer pads (up to 3 feet bgs) to the bedrock surface (approximately 10 to 12 feet).

In the context of work to be performed at the Site (e.g. preparation of a Site Cleanup Plan, submittal of bid documents/specifications for soil removal activities, etc.), this supplemental boring and soil sampling program (coupled with results of previous soil sampling) has provided a starting point in assessing the volume of soil which may require removal from the Site, derived from our current understanding of Site conditions. Based on the estimate provided above and adding a contingency to acknowledge the limitations associated with this estimate, such as unforeseen conditions to be encountered during removal of soil exceeding the 50 mg/kg criterion, an estimate of 200 cubic yards will be used in the development of future remedial plans and specifications as the soil volume which would require removal and disposal from the Site. We note that the total volume of soil that would actually be excavated in order to remove 150 to 200 cubic yards of soil exceeding the 50 mg/kg criterion will likely be greater because the above estimate assumes vertical excavation walls. Over-excavation to provide safe slopes for equipment and workers would likely be implemented. Therefore, the actual volume of soils to be excavated and/or removed from the Site will likely vary from the above estimate based on observations made in the field during implementation of remedial activities.



Aries Engineering, Inc.

Environmental Engineers and Hydrogeologists

46 South Main Street | Concord, NH 03301 | Phone: 603-228-0008 | Fax: 603-226-0374 | www.aries-eng.com

July 11, 2006
File No. 2001-012H

Mr. Greg Kirby
Department of Environmental Services
Oil Remediation Compliance Bureau
29 Hazen Drive, PO Box 95
Concord, NH, 03302-0095

Re: Amendment 1
Work Scope and Budget Estimate
Soil Excavation and Disposal – C.A.B. Services, Inc. and
Monitoring Well Replacement
Blanchette's Garage
300 Coos Street
Berlin, New Hampshire
NHDES No. 19894028

Dear Mr. Kirby:

On behalf of Mr. Norman Blanchette, Aries Engineering, Inc. (Aries) is submitting a work scope and budget estimate for monitoring well replacement and contractor costs associated with the contaminated soil excavation and disposal at the Blanchette's Garage site (site) located at 300 Coos Street in Berlin, New Hampshire. During contaminated soil removal and disposal to be conducted by C.A.B. Services, Inc. (CAB) of Dover, New Hampshire, Aries anticipates monitoring well MW-2 will be destroyed. Therefore, Aries is submitting a work scope and budget estimate to replace monitoring well MW-2 following site restoration. The soil excavation and disposal is being conducted as requested by the New Hampshire Department of Environmental Services (NHDES) in Special Condition #13 of the Groundwater Management Permit (GMP) issued for the site on September 9, 2005. CAB's costs to conduct the soil excavation and disposal are attached in the workscope authorization form for NHDES approval.

The work scope and budget estimate are being submitted to the NHDES for review and pre-approval for project costs to be considered eligible for reimbursement from the Oil Discharge and Disposal Cleanup Fund (ODDCF). CAB will be contracting directly with Mr. Blanchette. Consistent with Special Condition #13, the removal of the existing site 3,000-gallon gasoline underground storage tank (UST) will be conducted concurrent with the proposed soil excavation and disposal activities in general accordance with NHDES requirements. However, Aries understands that the UST removal, sampling and reporting are not eligible for reimbursement through the NHDES ODDCF; therefore, a work scope task and budget estimate for the UST removal, sampling and reporting are not included in the attached work scope.

WORK SCOPE OBJECTIVE

The work scope objective is to excavate and dispose of approximately 100 tons of PCS in the vicinity of the existing 3,000-gallon gasoline UST as an IRA. Following removal of the PCS, Aries will observe the replacement of monitoring well MW-2. The following work scope was prepared to accomplish these objectives.

Task 1.0 – Contractor Costs for PCS Excavation and Disposal

As the selected contractor, CAB will excavate and stockpile approximately 100 tons of PCS in the vicinity of the 3,000-gallon UST and monitoring well MW-2 for off-site disposal. Prior to the excavation work, CAB will contact "Dig Safe" and other utility companies (not contacted by Dig Safe) and request site representatives to mark out all underground utilities.

The PCS excavation will be backfilled using clean granular fill provided by CAB. The backfill will be compacted in 1-foot lifts by CAB using a backhoe bucket. Following backfill, the excavation area will be covered with asphalt to match the existing pavement.

Aries anticipates the site PCS will be managed as virgin petroleum contaminated soil.

The attached workscope authorization form includes CAB's budget estimate to conduct the IRA soil excavation and disposal in general accordance with NHDES's Unit-Based and Project-Based Costs. CAB will contract directly with Mr. Blanchette for the soil excavation and disposal work. A work scope and budget estimate for Aries' observation services has been pre-approved by the NHDES on February 13, 2006 and is not included in the attached budget estimate.

Task 2.0 - Monitoring Well Replacement

Since monitoring well MW-2 will likely be destroyed during PCS excavation work, the NHDES has requested monitoring well MW-2 be replaced to monitor the effectiveness of the PCS excavation. The replacement monitoring well will be installed using 4 1/4-inch inner diameter (ID) hollow stem augers. Split-spoon samples will be collected in the soil test boring at five-foot intervals or at observed changes in soil strata using a 1 3/8-inch ID split spoon sampler, a minimum of 18 inches in length. Well logs will be maintained by an Aries' engineer/geologist. Soil samples will be screened for VOCs in the field using the PID.

The replacement monitoring well will be constructed using 2-inch ID Schedule 40 PVC threaded-joint pipe and well screen. Approximately 10 feet of well screen with a 0.010-inch slot size will be installed in the test boring. Backfill material consisting of clean sand will be installed approximately 2 feet above the well screen. A 2-foot bentonite seal will be placed above the sand pack to hydraulically isolate the screened zone. The remaining portion of the annulus will be backfilled to an elevation approximately 2 feet below the ground surface. The replacement groundwater monitoring well will be protected at the ground surface with flush mounted roadway box and an expansion plug.

BUDGET ESTIMATE

According to available NHDES, Waste Management Division (WMD) records, the site is eligible for reimbursement of project costs through the NHDES Petroleum Fund (Fund). A work scope and budget estimate is attached for NHDES' review and pre-approval.


The total budget estimate for CAB's work scope is \$24,422. A total budget estimate for the monitoring well replacement is \$3,964, which includes \$1,089 for Aries' services and \$2,875 for drilling services. A budget estimate summary is attached in the Workscope Authorization form.

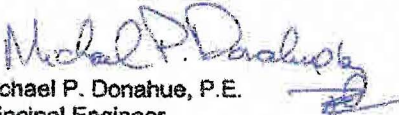
PROJECT SCHEDULE

Aries will work with CAB to schedule the soil excavation and disposal work as soon as the budget estimate is approved by NHDES.

Please contact us at (603) 228-0008 with your comments or questions regarding this matter.

Sincerely,
Aries Engineering, Inc.


Kathryn A. Ward, E.I.T.
Project Engineer


Michael P. Donahue, P.E.
Principal Engineer

KAW:sgc

Attachments: Workscope Authorization Form

WORKSCOPE AUTHORIZATION - Odb 407.01

Use this form (a) to obtain pre-approval from NHDES for performing corrective action at sites eligible for the Petroleum Reimbursement Funds under RSA 149-D, E, F or G. Contact NHDES for guidance on use of this form and the need for additional documentation to describe the proposed work, particularly for RSA 149-G work.
NOTE: You must receive prior approval even if private insurance is initially funding the work.



"REIMBURSEMENT CANNOT BE AUTHORIZED IF A COMPLETE ESTIMATE IS NOT PRE-APPROVED BY DES"

Facility Name: Bianchetto's Garage	NHDES No.: 149304028
Location Address: 300 Cross Street	UST/AST Fac. ID#: 112262
Location Town: Berlin	Project Type: LUST
Facility Owner: Mr. Norman Bianchetto	Project Phase: IKA
Dates of Work: Jul-06	Consultant: Arise Engineering, Inc.
	Contractor: C.A.B. Services, Inc.

Task Summary: Task 1.0 - C.A.B. Services, Inc.

CAB will sawcut asphalt; remove 1.5 feet of clean soil and temporary stockpile, excavate, load, transport and dispose of contaminated soil. CAB will compact backfill and asphalt to grade.

Description	Unit Basis (U)	Rate (r)	# Units	Estimated Cost
Foreman	hr	\$80.00	25	\$1,440.00
Operator	hr	\$85.00	34	\$1,344.00
Helper	hr	\$50.00	24	\$1,200.00
Back Truck	1/2 day	\$125.00	6	\$750.00
160 Excavator	1/2 day	\$340.00	4	\$1,360.00
Bobcat Loader	1/2 day	\$160.00	1.5	\$240.00
Vibratory Roller	1/2 day	\$165.00	2	\$330.00
Asphalt Saw	day	\$200.00	1	\$200.00
Safety Fence	foot	\$1.50	100	\$150.00
Power Broom	1/2 day	\$62.50	2	\$125.00
20 Ton Trlr	1/2 day	\$100.00	2	\$200.00
12 Ton Trlr	1/2 day	\$100.00	2	\$200.00
Triax Roll Off	hr	\$55.00	8	\$440.00
Pickup Truck	1/2 day	\$62.50	3	\$187.50
Per Diem	dayman	\$105.00	4	\$420.00
Dewatering Set up	week	\$750.00	1	\$750.00
Mobile-Demolition Frac Tank	hr	\$96.00	12	\$1,020.00
Frac Tank	1/2 day	\$25.00	6	\$150.00
Vacuum / Oil	hr	\$53.50	12	\$762.00
Disposal	yd	\$0.65	7000	\$4,550.00
Asphalt	Sq. Ft	\$650.00	3.25	\$2,112.50
Backfill Blank Port Sand	ton	\$12.50	75	\$937.50
3/4 Crush	ton	\$25.50	25	\$637.50
ESM: Fills & Disposal	ton	\$50.00	100	\$5,000.00
Task total:				\$24,422.00

Task Summary: 2.0 - monitoring Well WH-2 Replacement

Description	Unit Basis (U)	Rate (r)	# Units	Estimated Cost
Area - Engineer II - Field	hr	\$90.00	10	\$900.00
Supplies	LS	\$100.00	1	\$100.00
Mileage	mi	\$0.45	200	\$89.00
NH Boring	PAIRs	\$2,500.00	1	\$2,500.00
Subcontractor Markup - 15%	LB	\$375.00	1	\$375.00
Task total:				\$3,984.00
Total All Services:				\$28,396.00

Owner's Representative:

Kathleen Ward
(signature/date)

NHDES Approval:

(signature/date)

(f) Refer to Section VI of the Guidance Manual for information on applicable unit-based costs and rates.
Current rates are published on the CRGB web page in advance of Manual updates.

A report documenting the approved work must be provided to NHDES by:

Please be advised that for homeowner requests for reimbursement of oil discharge cleanup costs submitted after April 4, 2001, a presumption will be applied that the costs for investigation and remediation of groundwater and surface water contamination are covered up to the limits of the homeowner's policy. To overcome this presumption, a written certification from the insurer that coverage does not extend to these costs under the terms of the policy and the reasons therefor must be submitted with the request.

WORKSCOPE AUTHORIZATION - Odb 407.01

Use this form (a) to obtain pre-approval from MWDES for performing corrective action at sites eligible for the Petroleum Reimbursement Funds under RSA 486-G, E, F or G. Contact MWDES for guidance on use of this form and the need for additional documentation to describe the proposed work, particularly for RSA 486-G work.
NOTE: You must receive prior approval from EPA before incurring any liability for funding the work.

REIMBURSEMENT CANNOT BE AUTHORIZED IF A COMPLETE ESTIMATE IS NOT PRE-APPROVED BY DES

Facility Name: Blanchette Garage MWDES No.: 18064028
Location Address: 200 Cross Street UST/AST Fee Code: 172288
Location Town: Rock Project Type: LUST
Facility Owner: Mr. Norman Blanchette Project Phase: RIA
Date of Work: 1-2-20 Consultant: Alex Engineering, Inc.
Contractor: C.A.B. Services, Inc.

Task Summary: Task 1.0 - C.A.B. Services, Inc.

Description	Unit Basis (U)	Rate (R)	# Units	Estimated Cost
Foreman	hr	\$80.00	1	12.00
Operator	hr	\$38.00	25.24	1156.00
laborer	hr	\$20.00	23.0	1800.00
Back Truck	1/2 day	\$125.00	1	500.00
100 Excavator	1/2 day	\$340.00	1	5150.00
Bobcat Loader	1/2 day	\$160.00	1	240.00
Vibration Pile	1/2 day	\$105.00	2	212.00
Asphalt Saw	day	\$200.00	1	200.00
Utility Fork	day	\$1.00	100	100.00
Power Scoop	1/2 day	\$80.00	2	160.00
30 Ton Tr	1/2 day	\$100.00	2	200.00
12 Ton Tr	1/2 day	\$100.00	2	200.00
Time R/L	hr	\$65.00	8	520.00
Pickup Truck	1/2 day	\$22.50	1	112.50
Per Liter	Unitless	\$14.00	1	14.00
Location of Garb	hr	\$100.00	1	100.00
Immun. for 1000 Gallons	hr	\$100.00	1	100.00
Over. Land	1/2 day	\$60.00	1	150.00
Victrolux / Co	hr	\$33.00	13	429.00
Unlabeled	gal	\$0.65	1000	650.00
Asphalt	Sq Ft	\$280.00	3.25	1120.00
Shredded Bank Run Sand	ton	\$12.50	75	937.50
Oil Crags	ton	\$25.00	25	625.00
OSHA Trns & Deposit	day	\$20.00	100	2000.00
Task total:				21,446.00

Task Summary: 2.0 - Monitoring Well MW-2 Replacement

Description	Unit Basis (U)	Rate (R)	# Units	Estimated Cost
Owner - Engineer & F&E	hr	\$80.00	15	1200.00
Shedule	hr	\$100.00	1	100.00
Reliance	mi	\$0.45	200	90.00
SM Working	PARS	\$2,500.00	1	2,500.00
Subcontractor Markup - 15%	LS	\$375.00	1	375.00
Task total:				33,965.00
Total All Services:				55,411.00

Owner's Representative: Kathryn Ward

MWDES Approval: [Signature] 7/18/20

(1) Refer to Section VI of the Guidance Manual for information on applicable unit-based costs and rates.
Current rates are published as the ODBS web page in advance of Manual updates.

A report documenting the approved work must be provided to MWDES by: _____

Please be advised that for homeowner requests for reimbursement of oil discharge cleanup costs submitted after April 1, 2004, a presumption will be applied that the costs for investigation and remediation of groundwater and surface water contamination are covered up to the limits of the homeowner's policy. To overcome this presumption, a written certification from the insurer that coverage does not extend to these costs under the terms of the policy and the reasons therefor must be submitted with the request.

page 1 of 1

* Transportation costs must be broken out in time & materials consistent with current unit-based costs at the time of reimbursement

**ARIES ENGINEERING, INC.**

Environmental Engineers and Hydrogeologists

46 South Main Street • Concord, NH 03301 Phone: 603-228-0008 Fax: 603-226-0374 www.aries-eng.com

TRANSMITTAL

DATE: July 12, 2006
RE: 2001-012H
TO: Brett Rand
NH Department of Environmental Services
FROM: Kathryn A. Ward, E.I.T.
Aries Engineering, Inc.

VIA: ☒ Mail ☐ Express ☐ Pickup ☒ Electronic Submittal

QUANTITY	ITEM	DESCRIPTION
1	Document	Work Scope and Budget Estimate Amendment 1 Soil Excavation and Disposal C.A.B. Services, Inc. and Blanchette's Garage 300 Coos Street Berlin, NH NHDES No. 19894028

This document is being submitted electronically to the DES and a Project Manager's Duplicate Paper Copy has been forwarded via mail to the Groundwater Permits Coordinator at the DES as well.

cc: Greg Kirby - DES Project Manager's Duplicate Copy

APPENDIX D

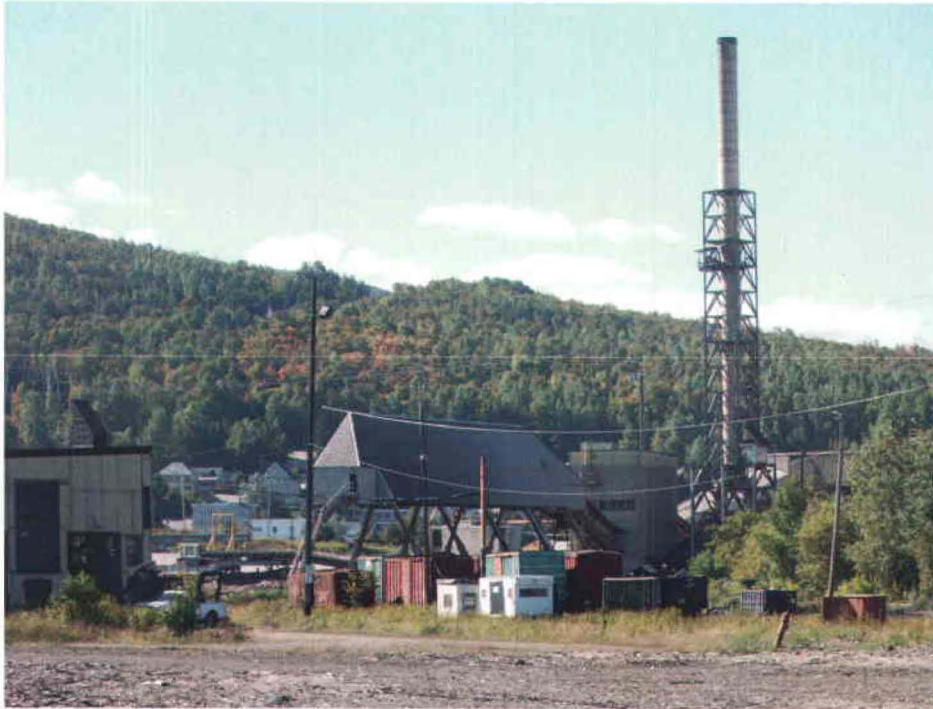
Site Photographs



Photograph 1. View of Dummer Yard Landfill from North Yard.



Photograph 2. View of stockpiled railroad ties in North Yard.



Photograph 3. View of chipping area from North Yard.



Photograph 4. View of drill cutting and purge water drums on Cell Plant site.



Photograph 5. View of monitoring wells on Cell Plant site .



Photograph 6. View of Railcar Repair building.



Photograph 7. View of potential fill port for suspect underground storage tank (UST) at northwest corner of Railcar Repair building.



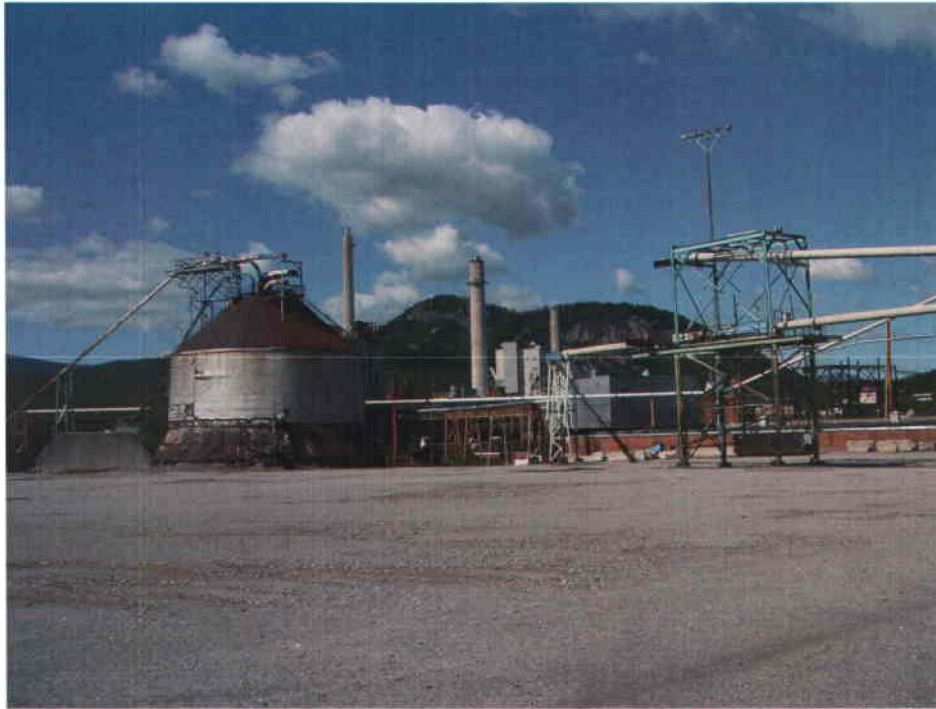
Photograph 8. View of possible fill port for suspect UST in repair pit of Railcar Repair building.



Photograph 9. View of oil at end of steel rod after inserting into the hole in the concrete floor (right of rod) in Railcar Repair building.



Photograph 10. View of monitoring well GZ-8, located on southwest side of Railcar Repair yard.



Photograph 11. View of former Atlas Chip Bin.



Photograph 12. View of aboveground storage tanks (AST) on south side of Wood Chipping area.



Photograph 13. View of parts washing station in Wood Room.



Photograph 14. View of transformers at Riverside Mill.



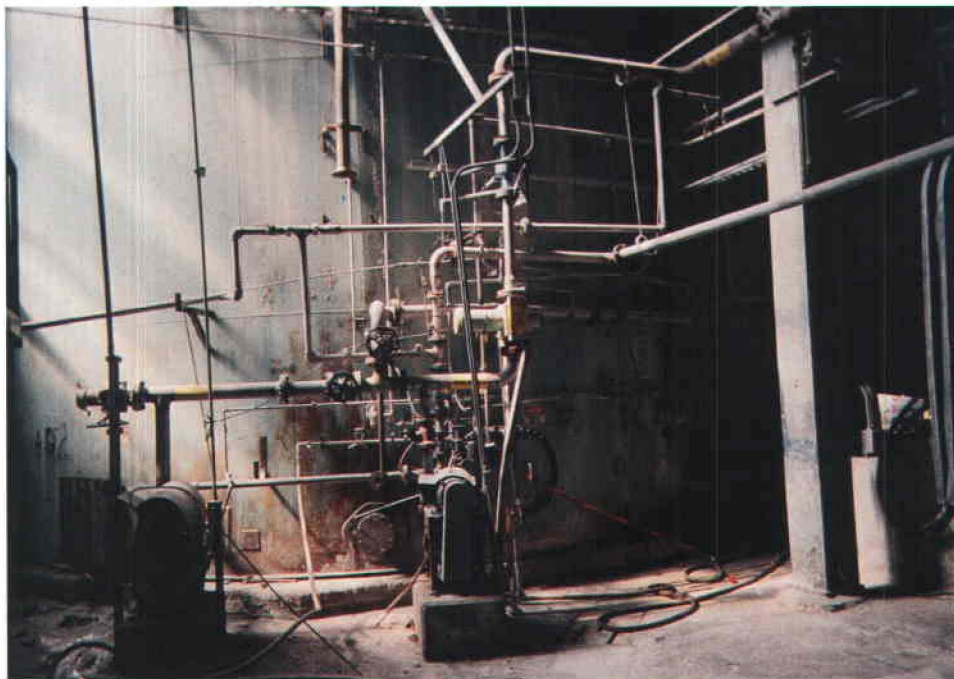
Photograph 15. View of Substation #2 on east side of Pulp Dryer and Burgess Storehouse.



Photograph 16. View of lube oil AST in Boiler Room.



Photograph 17. View of typical bulk storage tanks in Central Production area.



Photograph 18. View of typical piping in Bleachery Plant.



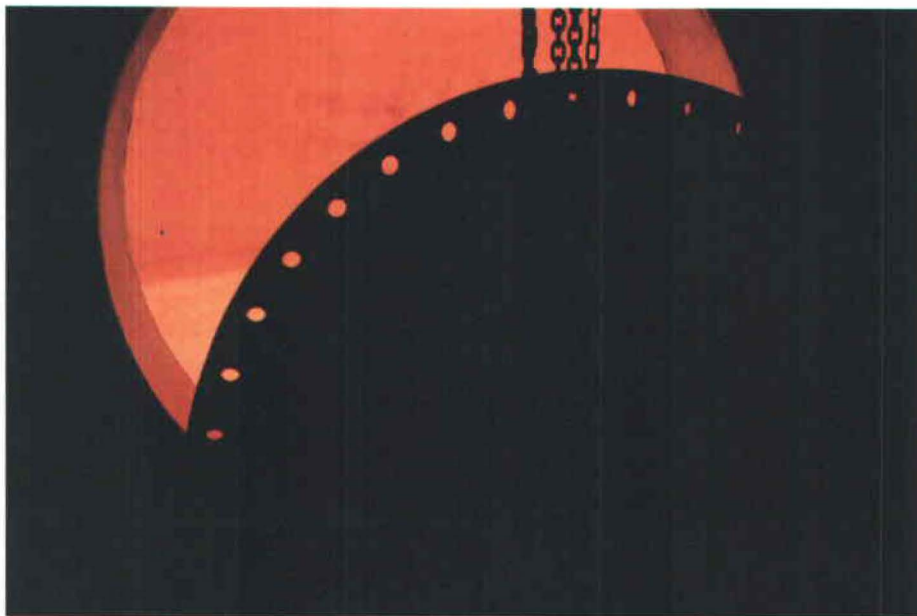
Photograph 19. View of waste and vent lines on west side of #2 Bleachery.



Photograph 20. View of forging equipment in Central Shop area.



Photograph 21. View of piping in Caustic Plant.



Photograph 22. View of empty pulp storage tank.